(19)日本国特許庁（ＪＰ）　(12)公開特許公報（Ａ）　(11)特許出願公開番号
特開2000－174894
(P2000－174894A)
(43)公開日　平成12年６月23日(2000.6.23)

(51)Int.Cl.⁷	識別記号	ＦＩ		テーマコード（参考）
Ｈ０４Ｍ　1/675		Ｈ０４Ｍ　1/66	Ｅ	５Ｋ０２７
1/66			Ｂ	

審査請求　未請求　請求項の数10　ＯＬ　（全 13 頁）

(21)出願番号　特願平10－345979

(22)出願日　平成10年12月４日(1998.12.4)

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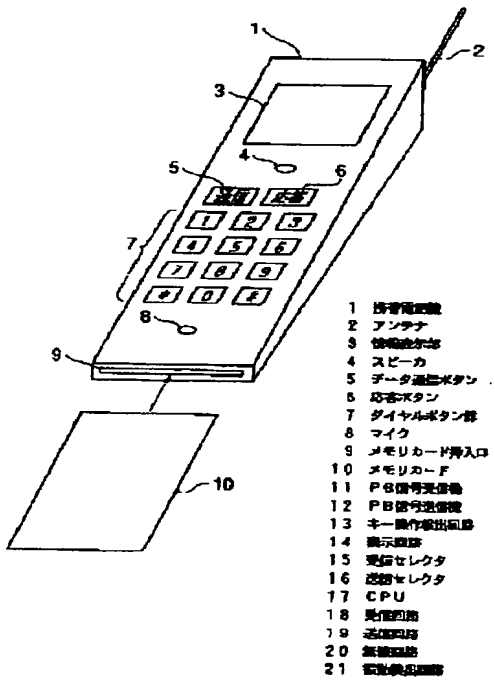
Ｆターム(参考)　5K027 AA11 BB09 EE11 GG08 HH11
HH14 HH24 MM03

(54)【発明の名称】　携帯電話機

(57)【要約】
【課題】　携帯電話機を紛失するか盗難に遭った場合、不正使用により莫大な通話料を払わされる可能性があった。また携帯電話機内の電子電話帳等を見られる可能性があった。
【解決手段】　携帯電話機１とシステム情報やユーザ情報を記憶するメモリカード１０を分離し、別々に管理できる様にすると共に、パスワードをメモリカード内に設けて、携帯電話機１から入力したパスワードがメモリカード内のパスワードと一致しなければ発信やユーザ情報の閲覧を止める。



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【特許請求の範囲】

【請求項１】　回線業者コード及び端末番号を含むシステム情報を記憶するメモリカードを装着する装着手段と、該回線業者コード及び端末番号を読み取る読取手段と、少なくとも前記回線業者コードと前記端末番号とによって発着信を行う発着信制御手段とを備えたことを特徴とする携帯電話機。

【請求項２】　前記メモリカードが装着された状態で、情報管理するサーバに接続する接続手段と、前記サーバの所定メモリ空間との間で、情報のアップロード、ダウンロードを行うデータ送受信手段とを備えたことを特徴とする請求項１に記載の携帯電話機。

【請求項３】　前記データ送受信手段は、他の端末装置が前記所定のメモリ空間に格納した情報をダウンロードする機能を有し当該ダウンロードした情報を前記メモリカードに書き込むことを特徴とする請求項２に記載の携帯電話機。

【請求項４】　発着信可能な携帯電話機において、予め定められたパスワードを記憶する記憶手段と、パスワードを入力する入力手段と、前記記憶手段に記憶されたパスワードと前記入力手段から利用者が入力したパスワードとが対応した場合にのみ発着信動作を許可する制御手段とを備えたことを特徴とする携帯電話機。

【請求項５】　予め定められたパスワードを記憶するメモリカードを装着する装着手段を備え、前記制御手段は、前記利用者が入力したパスワードと前記メモリカードに記憶されたパスワードが対応した場合にのみ発着信動作を許可することを特徴とする請求項４に記載の携帯電話機。

【請求項６】　少なくとも発信及び着信が可能な発着信動作モードと着信のみ可能な着信動作モードとが設定可能な携帯電話機において、予め定められたパスワードを記憶する記憶手段と、パスワードを入力する入力手段と、前記記憶手段に記憶されたパスワードと前記入力手段から利用者が入力したパスワードとの対応関係を判定する判定手段と、前記判定手段が前記入力手段から入力されたパスワードと前記記憶手段に記憶されたパスワードとが予め設定した回数以上対応しない場合には、前記着信モードに設定する動作モード設定手段とを備えたことを特徴とする携帯電話機。

【請求項７】　予め定められたパスワードを記憶するメモリカードを装着する装着手段を備え、前記判定手段は、前記利用者が入力したパスワードと前記メモリカードに記憶されたパスワードとの対応関係を判定することを特徴とする請求項６に記載の携帯電話機。

【請求項８】　発着信可能な携帯電話機において、未操作状態を検出する検出手段と、予め定められたパスワードを記憶する記憶手段と、パスワードを入力する入力手段と、前記検出手段が未操作状態と判断した場合には、パスワード入力待ちの状態にし、前記記憶手段に記憶されたパスワードと前記入力手段から利用者が入力したパスワードとが対応した場合にのみ発信又は着信動作を許可する制御手段とを備えたことを特徴とする携帯電話機。

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【請求項９】　予め定められたパスワードを記憶するメモリカードを装着する装着手段を備え、前記制御手段は、前記利用者が入力したパスワードと前記メモリカードに記憶されたパスワードとが対応した場合にのみ発信又は着信動作を許可することを特徴とする請求項８に記載の携帯電話機。

【請求項１０】　前記検出手段は、振動状態を検出する振動検出手段又は不操作状態を検出する操作検出手段であり、静止又は不操作の状態が所定時間継続した場合に、未操作状態と判定することを特徴とする請求項８又は請求項９に記載の携帯電話機。

【発明の詳細な説明】

【０００１】

【発明の属する技術分野】本発明は、無線回線を介して通話が行われる携帯電話機に関する。

【０００２】

【従来の技術】従来、システム情報やユーザ情報は携帯電話機に内蔵されたメモリに記憶していた。

【０００３】また、パスワードで本人の確認を行なうことは行なわれていなかった。

【０００４】

【発明が解決しようとする課題】しかしながら、上記のような従来の方式では、システム情報が携帯電話機の内蔵メモリに記憶されているので、新しい携帯電話機に買い替える時にも回線業者によるメモリの書き替えが必要で、手間と時間を要した。

【０００５】特に端末番号を変えずに携帯電話機を取り替える、いわゆる同番移行には特に手間と時間がかかった。

【０００６】また、ユーザ情報の記憶にも携帯電話機内蔵のメモリを使用していたので、携帯電話機を買い替える度に再入力が必要であった。

【０００７】ユーザ情報が大きくなった場合に、内蔵メモリではメモリ不足が生じるという問題もあった。

【０００８】現在の携帯電話機はセキュリティの保護に対する配慮、例えばパスワードの導入が為されていないために、携帯電話機が第三者の手に渡った場合、第三者による不正な発信が可能であり、ユーザ情報を見られるという問題もあった。

【０００９】

【課題を解決するための手段】上記の課題を解決するために請求項１に記載の発明は、回線業者コード及び端末番号を含むシステム情報を記憶するメモリカードを装着する装着手段と、該回線業者コード及び端末番号を読み取る読取手段と、少なくとも前記回線業者コードと前記端末番号とによって発着信を行う発着信制御手段とを備

えたことを特徴とする。

【００１０】本発明によれば、携帯電話機を取り替えてもメモリカードを装着替えすることにより、メモリカードに記憶された回線業者コード、端末番号の携帯電話機として機能する。

【００１１】本発明の請求項２に記載の携帯電話機は、請求項１に記載の発明において、前記メモリカードを装着された状態で、情報管理するサーバに接続する接続手段と、前記サーバの所定メモリ空間との間で、情報のアップロード、ダウンロードを行うデータ送受信手段とを備えたことを特徴とする。

【００１２】本発明によれば、携帯電話機は、サーバとの間でデータの送受信を行うことができる。

【００１３】本発明の請求項３に記載の携帯電話機は、請求項２に記載の発明において、前記データ送受信手段は、他の端末装置が前記所定のメモリ空間に格納した情報をダウンロードする機能を有し当該ダウンロードした情報を前記メモリカードに書き込むことを特徴とする。

【００１４】本発明によれば、携帯電話機は、サーバを介して他の端末装置のデータをダウンロードし、メモリカードに書き込むことができる。

【００１５】本発明の請求項４に記載の携帯電話機は、発着信可能な携帯電話機において、予め定められたパスワードを記憶する記憶手段と、パスワードを入力する入力手段と、前記記憶手段に記憶されたパスワードと前記入力手段から利用者が入力したパスワードとが対応した場合にのみ発着信動作を許可する制御手段とを備えたことを特徴とする。

【００１６】本発明によれば、パスワードの使用が可能になるので、携帯電話機の他人による不正使用を防止できる。

【００１７】本発明の請求項５に記載の携帯電話機は、請求項４に記載の発明において、予め定められたパスワードを記憶するメモリカードを装着する装着手段を備え、前記制御手段は、前記利用者が入力したパスワードと前記メモリカードに記憶されたパスワードが対応した場合にのみ発着信動作を許可することを特徴とする。

【００１８】本発明によれば、パスワードがメモリカードに記憶されているので、携帯電話機を取り替えてもセキュリティは保持される。

【００１９】本発明の請求項６に記載の携帯電話機は、少なくとも発信及び着信が可能な発着信動作モードと着信のみ可能な着信動作モードとが設定可能な携帯電話機において、予め定められたパスワードを記憶する記憶手段と、パスワードを入力する入力手段と、前記記憶手段に記憶されたパスワードと前記入力手段から利用者が入力したパスワードとの対応関係を判定する判定手段と、前記判定手段が前記入力手段から入力されたパスワードと前記記憶手段に記憶されたパスワードとが予め設定した回数以上対応しない場合には、前記着信モードに設定する動作モード設定手段とを備えたことを特徴とする。

【００２０】本発明によれば、携帯電話機に記憶されたパスワードと対応しないパスワードが予め定められた回数以上入力された場合には着信モードに設定できるので、第三者による不正な発信を防止できる。

【００２１】本発明の請求項７に記載の携帯電話機は、請求項６に記載の発明において、予め定められたパスワードを記憶するメモリカードを装着する装着手段を備え、前記判定手段は、前記利用者が入力したパスワードと前記メモリカードに記憶されたパスワードとの対応関係を判定することを特徴とする。

【００２２】本発明によれば、パスワードがメモリカードに記憶されているので、メモリカードを保管している限り、携帯電話機からの第三者による不正発信を防止できる。

【００２３】本発明の請求項８に記載の携帯電話機は、発着信可能な携帯電話機において、未操作状態を検出する検出手段と、予め定められたパスワードを記憶する記憶手段と、パスワードを入力する入力手段と、前記検出手段が未操作状態と判断した場合には、パスワード入力待ちの状態にし、前記記憶手段に記憶されたパスワードと前記入力手段から利用者が入力したパスワードとが対応した場合にのみ発着信動作を許可する制御手段とを備えたことを特徴とする。

【００２４】本発明によれば、携帯電話機が未操作と判断された場合には、パスワードを入力しなければ使用可能状態にならないので、置き忘れ、盗難等の場合における不正使用を防止または軽減できる。

【００２５】本発明の請求項９に記載の携帯電話機は、請求項８に記載の発明において、予め定められたパスワードを記憶するメモリカードを装着する装着手段を備え、前記制御手段は、前記利用者が入力したパスワードと前記メモリカードに記憶されたパスワードとが対応した場合にのみ発着信動作を許可することを特徴とする。

【００２６】本発明によれば、携帯電話機が未操作と判断されたばあいには、携帯電話機にメモリカードが装着されていても、第三者による不正使用を防止または軽減できる。

【００２７】本発明の請求項１０に記載の携帯電話機は、請求項８又は請求項９に記載の発明において、前記検出手段は、振動状態を検出する振動検出手段又は不操作状態を検出する操作検出手段であり、静止又は不操作の状態が所定時間継続した場合に、未操作状態と判定することを特徴とする。

【００２８】本発明によれば、静止または不操作の状態が所定の時間継続した場合に未操作状態と判定するので、置き忘れ、盗難等の場合の第三者による不正使用の防止または軽減の効果が一段と大きくなる。

【００２９】

【発明の実施の形態】図１は本発明の実施の形態による

携帯電話機の外観図で、１は携帯電話機本体、２はアンテナ、３は情報表示部、４はスピーカ（受話器）、５はデータ通信ボタン、６は応答ボタン、７はダイヤルボタン群、８はマイクロホン（送話器）、９はメモリカード挿入口、１０はメモリカードである。

【００３０】図２はメモリカードに記憶させる情報の内容を図示したもので、システム情報としては、携帯電話サービスを提供する回線業者コード、端末番号（電話番号）、パスワード、パスワード不一致回数、操作規制情報等がある。

【００３１】ユーザ情報としては、電話情報（電子電話帳）、メモ情報等がある。

【００３２】図３は携帯電話機１のブロック構成図で、４は図１のスピーカ（受話器）、８は図１のマイクロホン（送話器）、１０は同じく図１のメモリカードである。

【００３３】１１は押しボタンダイヤル信号受信機（ＰＢ信号受信機、以下押しボタンダイヤルをＰＢと略称する）、１２はＰＢ信号送信機、１３はキー操作検出回路、１４は図１の情報表示部３に表示するための表示回路である。

【００３４】１５は受信信号の出力先を切り替える受信セレクタ、１６は送信信号の入力先を切り替える送信セレクタ、１７は携帯電話機全体を制御する中央処理ユニット（以下、ＣＰＵと略称する）である。

【００３５】２０は電波の受信、送信を行なう無線回路、１８は無線回路２０で受信した情報を整形する受信回路、１９は送信情報を無線化するための送信回路、２１は携帯電話機の振動を検出する振動検出回路である。

【００３６】図３において、メモリカード１０を除いた部分が本発明で言う携帯電話機１である。従って、携帯電話機１にメモリカード１０が挿入されて従来の携帯電話機の機能を発揮する。

【００３７】図４は、本発明の実施の形態における、携帯電話機のユーザと、携帯電話機の販売店と、携帯電話サービスを提供する回線業者の関係を示す。

【００３８】ユーザは回線業者と携帯電話サービスの使用契約を結ぶ。回線業者は回線業者コード、端末番号、パスワード等をメモリカードに書き込み、パスワード不一致回数をクリアし、操作規制を解除したメモリカードをユーザに渡す。

【００３９】一方、回線業者は図５に示すように、管理端末のデータベースにメモリカードと同じ内容のデータを記録する。ここでアクセス番号とは貸しメモリサービスを利用する場合、ユーザ開放メモリ空間へアクセスするための番号である。

【００４０】メモリカード１０を受け取ったユーザは販売店へ行き、回線業者から受け取ったメモリカード１０が使用できる携帯電話機１を購入し、携帯電話機１を受け取る。

【００４１】ユーザは購入した携帯電話機１にメモリカード１０を挿入し、パスワードを入力すれば使用可能になる。

【００４２】メモリカード１０と携帯電話機１の物理的、電気的インタフェースが、全回線業者の間で統一されれば、ユーザはどの製造業者の、どの機種でも自由に選択できる効果がある。従って、携帯電話機１の機種の買い替えも自由になる。

【００４３】図６は、携帯電話機１の情報表示部３に表示される代表的な画面を示したもので、図６（ａ）はパスワードの入力を要求する画面、図６（ｂ）は入力したパスワードが正しかったことを示す画面、図６（ｃ）はメモリカード内の回線業者コードと携帯電話機１の内蔵メモリの回線業者コードが不一致であることを表示する画面である。

【００４４】図６（ｄ）はメモリカードが挿入されていないことを表示する画面、図６（ｅ）は入力したパスワードとメモリカードのパスワードが規定の回数以上不一致であった場合に、該携帯電話機１が着信専用になったことを示す画面、図６（ｆ）はサービスセンタとデータ通信をする場合のメニュー画面である。

【００４５】図７に示すフローチャートによって、携帯電話機１の電源投入時の初期設定を説明する。

【００４６】電源を投入すると、先ずメモリカード１０の実装をチェックする（ステップ１０１）。

【００４７】メモリカード１０が実装されていれば、メモリカード１０内の回線業者コードと携帯電話機１の内蔵メモリに登録してある回線業者コードを照合する（ステップ１０２）。

【００４８】回線業者コードが一致していれば、メモリカード１０内の操作規制情報をチェックする（ステップ１０３）。

【００４９】操作規制が解除されていれば、パスワードの入力を要求するメッセージ図６（ａ）を情報表示部３に表示する（ステップ１０４）。

【００５０】ユーザが図１のダイヤルボタン群７を操作して、回線業者との契約で決められたパスワードを入力すると、メモリカード１０内のパスワードとチェックされる（ステップ１０５）。

【００５１】パスワードが一致した場合には、メモリカード１０内のパスワード不一致回数をクリアし（ステップ１０６）、情報表示部３に図６（ｂ）に示すパスワード照合ＯＫを表示する（ステップ１０７）。

【００５２】パスワードの照合を完了した後、携帯電話機１の内蔵メモリエリアにメモリカード内の端末番号（電話番号）を登録し（ステップ１０８）、以後該端末番号の携帯電話機１になり、該端末番号への着信を受け付ける。

【００５３】この状態を通常運用状態と呼び、この携帯電話機からの発信、着信が可能になり、ユーザ情報の読

み出しおよび変更も可能になる。

【００５４】電源ＯＮでメモリカード１０が未実装であった場合には、図６（ｄ）に示す如くメモリカード無しを情報表示部３に表示する（ステップ１０９）。

【００５５】この時、携帯電話機１の内蔵メモリに登録してある端末番号をクリアする（ステップ１１０）ので着信もできなくなる。

【００５６】通常運用状態でもメモリカード１０の実装を監視しており、メモリカード１０が実装されていないことを検出すると、携帯電話機１の内蔵メモリに登録してある端末番号をクリアし、以後の着信は受け付けない。

【００５７】ステップ１０２でメモリカード１０内の回線業者コードと携帯電話機内蔵メモリ内の回線業者コードが不一致であった場合には、図６（ｃ）に示すメモリカード不正表示を情報表示部３に表示し（ステップ１１１）、正常なメモリカードの挿入を待つ。

【００５８】ユーザが入力したパスワードがメモリカード１０内のパスワードと不一致の場合には、メモリカード１０内のパスワード不一致回数を更新し（ステップ１１２）、パスワード不一致回数が規定回数（携帯電話機内蔵メモリに設定してある値）に達していなければ情報表示部３に図６（ａ）のパスワード入力要求の表示をする（ステップ１０４）。

【００５９】パスワード不一致回数が規定回数に達した場合には、メモリカード１０内のパスワード不一致回数をクリアし（ステップ１１４）、メモリカード内の操作規制情報を規制に設定する（ステップ１１５）。

【００６０】パスワード不一致回数オーバーで操作規制になった場合、およびステップ１０３の操作規制チェックで操作規制がされていることが判明した場合には、図１の応答ボタン６以外の操作を規制し、情報表示部３に図６（ｅ）の操作規制表示をする（ステップ１１６）。

【００６１】そしてメモリカード１０内の端末番号を携帯電話機１の内蔵メモリに登録し（ステップ１１７）、以後この端末番号の携帯電話機として着信のみを受け付ける。

【００６２】以上の本発明の実施の形態では、販売店から購入した携帯電話機１に、回線業者が発行したメモリカード１０を挿入することにより、従来どおりの携帯電話機として機能する上、ユーザは別の携帯電話機への買い替えを、回線業者との契約変更なしで行なえる。

【００６３】携帯電話機を紛失するか、盗難に遭った場合に、従来の一体型携帯電話機であれば自由に電話をかけることもできるし、電子電話帳の様な個人情報を見ることも可能であったが、本発明の様に携帯電話機１とメモリカード１０を分離できれば、使用時以外には分離して保管することによって、紛失、盗難の場合にも過大な通話料を負担させられることもなくなる。

【００６４】メモリカード１０付きの携帯電話機１の紛失は、置き忘れによることが多いと考えられる。本発明の実施の形態では、置き忘れに起因する他人による不正使用を防止するために、図３の振動検出回路２１を設けた。

【００６５】即ち、振動検出回路２１が携帯電話機１の振動を検出し、ＣＰＵ１７が検出結果を常時監視し、一定時間振動がない状態（携帯電話機が静止した状態）が継続するか、一定時間何の操作もされない場合には、図８に示すように携帯電話機１をパスワード入力待ちの状態にする（ステップ２０１）。

【００６６】パスワード入力待ちの状態では携帯電話機の機能は着信のみに限定される。

【００６７】この状態でユーザが携帯電話機１を使用した場合には、図９に示すフローチャートに従った動作をする。

【００６８】即ち、キー操作が行なわれると応答ボタンかどうかを判断し（ステップ３０１）、応答ボタンでなければパスワード入力待ちかどうかを判断する（ステップ３０２）。

【００６９】パスワード入力待ちであれば情報表示部３に図６（ａ）に示したメッセージを表示し（ステップ３０３）、ユーザにパスワードの入力を促す。

【００７０】ステップ３０１で応答ボタンの操作であれば応答処理を行なう（ステップ３０５）。

【００７１】ステップ３０２でパスワード入力待ちの状態でなければ、即ち、既にパスワードが入力されている状態であればキー操作を受け付ける（ステップ３０４）。

【００７２】本発明の実施の形態においては、回線業者が管理端末のメモリの一部をユーザに貸す、貸しメモリサービスが可能である。

【００７３】貸しメモリサービスは、ユーザ情報の増加によって携帯電話機１内のユーザ情報格納メモリの不足を補うこと、および携帯電話機１内のユーザ情報の保管場所を提供することを目的としている。

【００７４】ユーザは回線業者と契約し、回線業者からサーバアクセス番号をもらう。

【００７５】回線業者はサービスセンタ内のサーバに図５に示すデータベースにユーザ情報を登録する。

【００７６】データベースには、端末番号、契約者氏名、パスワード、貸しメモリサービスの有無、の管理情報と、ユーザに開放するメモリエリアが書き込まれる。

【００７７】携帯電話機１とサービスセンタは、図１３に示すように無線基地局あるいは無線中継局を経由して電波で接続される。

【００７８】図１０に本サービスの概略システム構成図を示す。

【００７９】ユーザは携帯電話機１からサービスセンタを呼んで通話状態にし、ユーザ情報のやり取りを行なう。サーバから携帯電話機１へユーザ情報を転送するこ

とをダウンロード、携帯電話機１からサーバへユーザ情報を転送することをアップロードと呼ぶ。

【００８０】ダウンロードの場合は、ユーザ情報を電波に乗せてサーバから携帯電話機１へ送り、携帯電話機１はメモリカード１０へ受信したユーザ情報を格納する。

【００８１】アップロードの場合は、携帯電話機１内のメモリカード１０のユーザ情報を読み出し、電波に乗せてサーバへ送信する。

【００８２】ユーザ情報、および携帯電話機１とサービスセンタの間の信号のやり取りはＰＢ信号を組み合わせたコードで行なわれる。

【００８３】ＰＢ信号と各種コードの変換の一例を図１２に示す。コードはユーザ情報コードとシステム情報コードに分類され、図１２（ａ）、（ｂ）、（ｃ）、はユーザ情報コード変換図で、２桁の数字でアルファベット、カタカナ、ひらがな、記号を表し、図１２（ｄ）、（ｅ）、はシステム情報コードで“＃ＸＸ＊”の形をとる。

【００８４】ユーザ情報は０～９を２つ組み合わせてコード化される。例えば携帯電話機１内のユーザ情報０１２３は、アルファベット表示コード“＃００＊”プラス９０９１９２９３のＰＢ信号に変換されて電波に乗せて送られる。また携帯電話機１が受信した“＃００＊９０９１９２９３”のＰＢ信号は０１２３に置き換えてユーザ情報としてメモリカード１０に格納される。

【００８５】システム情報は“＃ＸＸ＊”の４桁のＰＢ信号で表現される。従って“＃００＊”の次に送られるＰＢ信号は、図１２（ａ）のアルファベット変換図を用いて変換する。

【００８６】図１１のシーケンスチャートを用いてダウンロードおよびアップロードの動作を説明する。

【００８７】ユーザはサービスセンタへ電話する（ステップ４０１）。サービスセンタではこれに応答して“通信ボタンを押し、アクセス番号をダイヤルして下さい”と言う音声ガイダンスを送ってくる（ステップ４０２）。

【００８８】この電波は携帯電話機１の無線回路２０で受信され、受信回路１８、受信セレクタ１５を通してスピーカ４に送られ前記ガイダンスをユーザに聞かせる。

【００８９】ガイダンスを聞いたユーザは通信ボタンを押下し、これにより図３のＣＰＵ１７は受信セレクタ１５および送信セレクタ１６をそれぞれＰＢ信号受信機１１側およびＰＢ信号送信機１２側に切り替える。

【００９０】続いてダイヤルボタンを押下してアクセス番号‘ＸＸＸＸＸ’を入力すると、キー操作検出回路１３で検出されてＣＰＵ１７へ通知され、ＣＰＵ１７は先頭にシステム情報コード“＃１７＊”を付加して、“＃１７＊ＸＸＸＸＸ”の送出をＰＢ信号送信機１２に指示する。コード化されたＰＢ信号は送信セレクタ１６、送信回路１９、無線回路２０を経由して電波でサービスセンタへ送られる（ステップ４０３）。

【００９１】サービスセンタでは受信したアクセス番号コード“＃１７＊ＸＸＸＸＸ”の内‘ＸＸＸＸＸ’を図５のサーバ内データベースから検索して、一致したものがあればパスワード送信要求“＃１８＊”のＰＢ信号を携帯電話機１へ送信する（ステップ４０４）。一致しなければ通信を切断する。

【００９２】パスワード送信要求信号“＃１８＊”は無線回路２０で受信され、受信回路１８、受信セレクタ１５、ＰＢ信号受信機１１の経路でＣＰＵ１７に送られ、ＣＰＵ１７は図６（ａ）の“パスワード？”を情報表示部３に表示する。

【００９３】ユーザがダイヤルボタンを押下してパスワード‘ＹＹＹＹＹ’を入力すると、ＰＢ信号“＃１９＊ＹＹＹＹＹ”に変換され、アクセス番号の場合と同様の動作でパスワードがサービスセンタへ送信される（ステップ４０５）。

【００９４】サービスセンタではパスワード“＃１９＊ＹＹＹＹＹ”の内‘ＹＹＹＹＹ’を図５のサーバ内データベースと照合し、一致したものがあればメニュー表示要求信号“＃０５＊”を携帯電話機１へ送信してくる（ステップ４０６）。一致したものが無ければ通信を切断する。

【００９５】携帯電話機１ではＣＰＵ１７がこれを認識し、図３の表示回路１４に指示をして情報表示部３に図６（ｆ）のメニュー表示をする。

【００９６】ユーザがダイヤルボタン“２”を押してダウンロードを選択すると、ＣＰＵ１７によってＰＢ信号“＃１１＊”に変換され、サービスセンタへ送信される（ステップ４０７）。

【００９７】サービスセンタではダウンロードの準備を行ない、携帯電話機１に対してダウンロード開始信号“＃１２＊”を送信した（ステップ４０８）後、該ユーザに開放されたメモリ空間の情報を図１２の変換図に従い変換して、ユーザ情報として携帯電話機１へ転送してくる（ステップ４０９）。

【００９８】携帯電話機１ではダウンロード開始信号“＃１２＊”を受信した後のＰＢ信号を図１２の変換図に従い元のユーザ情報に逆変換してメモリカード１０へ格納する。

【００９９】ＰＢ信号の逆変換およびメモリカード１０への書き込みは、サービスセンタからダウンロード終了信号“＃１３＊”を受信するまで行なう。

【０１００】サービスセンタでは、サービスセンタ内のユーザ開放空間のユーザ情報のダウンロードを終われば、ダウンロード終了信号“＃１３＊”を送信する（ステップ４１０）。

【０１０１】続いて、再度メニュー表示要求信号“＃０５＊”を送ってくるので（ステップ４１１）、携帯電話機１ではＣＰＵ１７の制御で情報表示部３に図６（ｆ）

のメニューを表示する。

【０１０２】この状態で、ユーザがダイヤルボタン“１”を押してアップロードを選択すれば、ＣＰＵ１７によってアップロード要求信号“＃１４＊”に変換され、サービスセンタへ送信される（ステップ４１２）。

【０１０３】サービスセンタではアップロード要求信号“＃１４＊”を受信した後、アップロード情報の受信準備を行い、携帯電話機１へアップロード準備完了信号“＃１５＊”を送信する（ステップ４１３）。

【０１０４】この信号を受信した携帯電話機１では、メモリカード１０からユーザ情報を読み出し、図１２の変換図従い変換をしてユーザ情報としてサービスセンタへ送信する（ステップ４１４）。

【０１０５】サービスセンタでは受信したＰＢ信号を図１２の変換図に従いコード化して、図５に示す該ユーザに開放されたメモリ空間へユーザ情報を格納する。

【０１０６】ＰＢ信号の変換およびコードの書き込みは、携帯電話機１からのアップロード終了信号“＃１６＊”を受信するまで行なう。

【０１０７】携帯電話機１はメモリカード１０内のユーザ情報のアップロードを終了するとアップロード終了信号“＃１６＊”をサービスセンタへ送信する（ステップ４１５）。

【０１０８】サービスセンタは、アップロード終了信号“＃１６＊”を受信すると、再度メニュー表示要求信号“＃０５＊”を携帯電話機１に送信し（ステップ４１６）、携帯電話機１では図６（ｆ）のメニュー画面を情報表示部３に表示する。

【０１０９】携帯電話機１では、アップロード要求もダウンロード要求も無ければサービスセンタへの接続を切断する。

【０１１０】以上のシーケンスにより、サービスセンタ内のユーザ情報の携帯電話機１のメモリカード１０へのダウンロード、および携帯電話機１のメモリカード１０からサービスセンタ内メモリのユーザ開放空間へのアップロードを行なうことができる。

【０１１１】本発明の実施の形態では、ＰＢ信号によるコード化で情報のやり取りを可能にしたため、携帯電話機１にモデム等の回路を内蔵しなくても情報端末として使用することができる。

【０１１２】もし、他の端末装置（例えばパーソナルコンピュータ、パソコンと略称する）とのデータ通信を行なう場合には、サービスセンタ経由で行なうことができる。

【０１１３】この場合には図１３に示すようにサービスセンタの管理端末にモデムを接続し、他の端末装置（例えばパソコン）とモデム通信を行なうことにより、データ転送が可能になる。

【０１１４】図１４は他の端末（パソコン）利用者が、回線業者の登録ユーザである場合のシーケンスチャートである。以下図１４により動作シーケンスを説明する。

【０１１５】先ず、利用者がサービスセンタへ電話をかける（ステップ５０１）。サービスセンタの管理端末とパソコン間でモデムのトレーニングを実施し、同期が確立すれば“アクセス番号、パスワード入力画面”図１５（ａ）をサービスセンタからパソコンへ送信する（ステップ５０２）。

【０１１６】利用者はアクセス番号とパスワードを入力し、Ｅｎｔｅｒキーを押下してサービスセンタの管理端末へアクセス番号とパスワードを送信する（ステップ５０３）。

【０１１７】管理端末では図５に示すデータベースから受信したアクセス番号を検索し、パスワードを照合する。アクセス番号が登録されており、パスワードが一致した場合には、パソコンに対して“ユーザ情報画面”図１５（ｂ）を送信する（ステップ５０４）。

【０１１８】ユーザ情報画面は、図５に示すユーザ開放空間に登録してある情報を編集したものである。

【０１１９】利用者はキー操作によってキー情報を管理端末へ送り（ステップ５０５）、画面上の情報を変更できる。画面上の情報変更は、管理端末から画面を再表示することによって行なう（ステップ５０６）。

【０１２０】変更が終了した場合、パソコンでＥｎｔｅｒキーを押下し、Ｅｎｔｅｒキー押下情報を管理端末に送る（ステップ５０７）。

【０１２１】Ｅｎｔｅｒキー押下情報を受け取った管理端末は“確認メッセージ”図１５（ｃ）をパソコンへ送信する（ステップ５０８）。

【０１２２】利用者は変更を実施するかキャンセルするかをキー操作で指示できる。即ち、変更する場合はＹキーを押下、キャンセルする場合はＮキーを押下して、管理端末に送信する（ステップ５０９）。

【０１２３】Ｙキー押下によって管理端末は変更情報を図５に示すユーザ開放空間に登録し、Ｎキー押下の時は図５に示すユーザ開放空間に対する登録を行なわない。

【０１２４】この様にしてパソコンによるユーザ情報の変更が可能であるから、パソコンと携帯電話機１はデータベースを介して間接的に通信ができる。

【０１２５】なお、アクセス番号が登録されていないか、パスワードが一致しない場合には通信を切断する。

【０１２６】

【発明の効果】本発明によれば、携帯電話機に記憶された回線業者コードとメモリカード内の回線業者コードが一致していれば、メモリカードの差し換えだけで自由に携帯電話機を変えられる効果を有する。

【０１２７】また端末番号を変えずに携帯電話機を取り替える同番移行もメモリカードの差し換えのみで行なえる効果を有する。

【０１２８】携帯電話機を取り替えても、ユーザ情報がメモリカードに記憶されているので、再入力の必要が無

いという効果を有する。

【０１２９】メモリカードのメモリ容量を大きくすることができるので、ユーザ情報記憶用の携帯電話機内部メモリが不足することを避けることができる効果を有する。

【０１３０】メモリカードにパスワードを記憶しておき、ユーザが携帯電話機から入力したパスワードと照合することによって不正使用を防止できる効果を有する。

【０１３１】携帯電話機とメモリカードを別個に保管することによって、携帯電話機あるいはメモリカードを紛失するかあるいは盗難にあった場合の不正使用を防止できる効果を有する。

【０１３２】サーバのユーザに開放されたメモリ空間を介して他の端末装置、例えばパソコンとデータのやり取りができる効果を有する。

【図面の簡単な説明】

【図１】本発明の実施の形態における携帯電話機の外観図である。

【図２】メモリカードに記憶する内容の一例を示す図である。

【図３】携帯電話機の内部構成を示すブロック図である。

【図４】本発明の実施の形態における、ユーザと回線業者と販売店の関係を示す図である。

【図５】回線業者のデータベースの構成を示す図である。

【図６】携帯電話機の表示部の表示例を示す図である。

【図７】携帯電話機の使用形態を示すフローチャートである。

【図８】携帯電話機の静止および未操作監視時のフローチャートである。

【図９】携帯電話機のキー操作時のフローチャートである。

【図１０】携帯電話機からサービスセンタのユーザ開放空間へのユーザ情報のアップロード、ダウンロードを示す図である。

【図１１】携帯電話機からサービスセンタのユーザ開放空間へのユーザ情報のアップロード、ダウンロードの手順を示すシーケンスチャートである。

【図１２】ＰＢ信号と文字コード等の変換図である。

【図１３】携帯電話機と他の端末装置、例えばパソコンの通信を示すシステム図である。

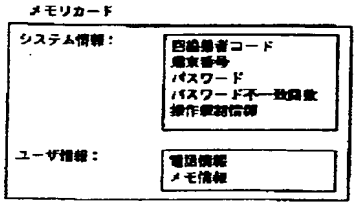
【図１４】サービスセンタと端末装置、例えばパソコンの通信の手順を示すシーケンスチャートである。

【図１５】サービスセンタと端末装置、例えばパソコンの通信におけるパソコンの画面表示例である。

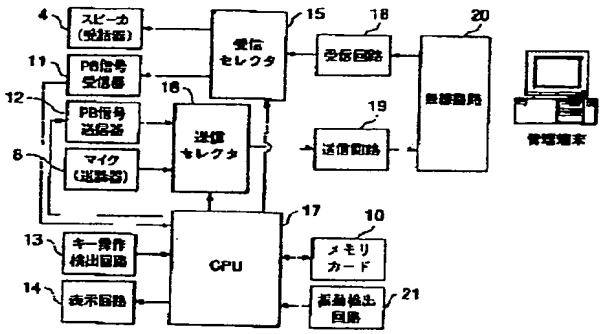
【符号の説明】

１　携帯電話機
２　アンテナ
３　情報表示部
４　スピーカ
５　データ通信ボタン
６　応答ボタン
７　ダイヤルボタン群
８　マイク
９　メモリカード挿入口
１０　メモリカード
１１　ＰＢ信号受信機
１２　ＰＢ信号送信機
１３　キー操作検出回路
１４　表示回路
１５　受信セレクタ
１６　送信セレクタ
１７　ＣＰＵ
１８　受信回路
１９　送信回路
２０　無線回路
２１　振動検出回路

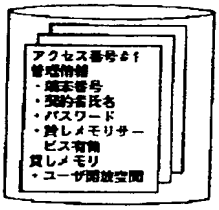
【図２】



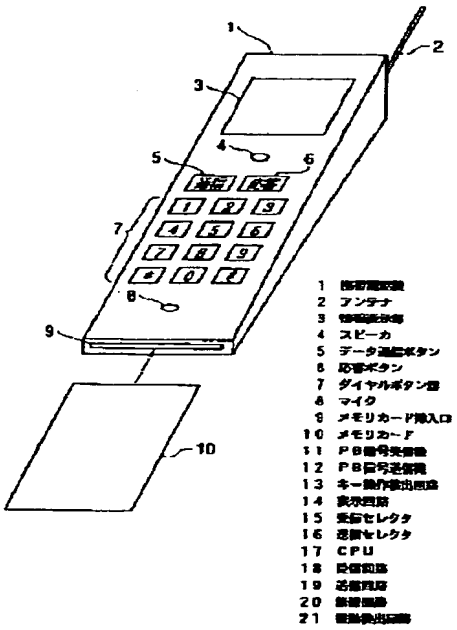
【図３】



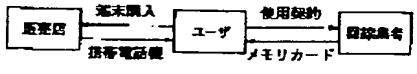
【図５】



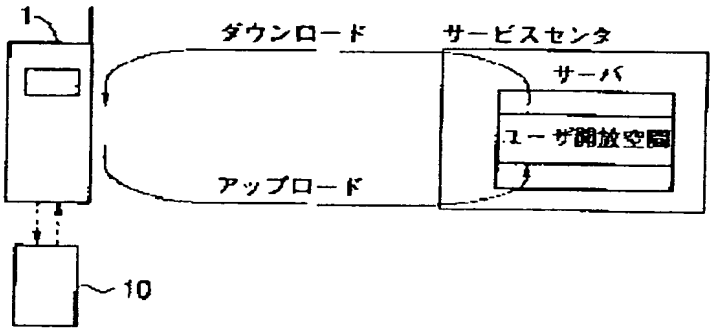
【図１】



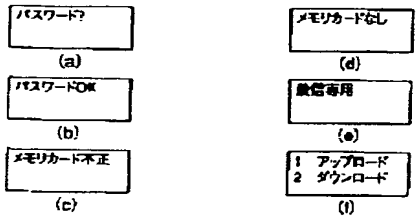
【図４】



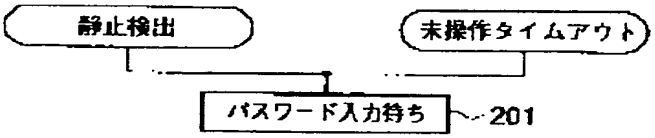
【図１０】



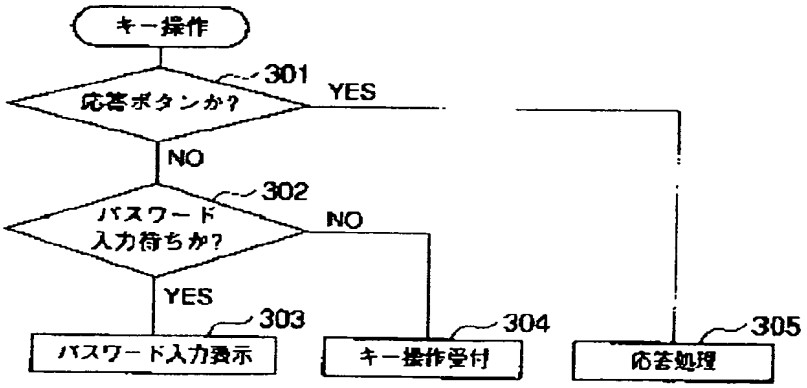
【図６】



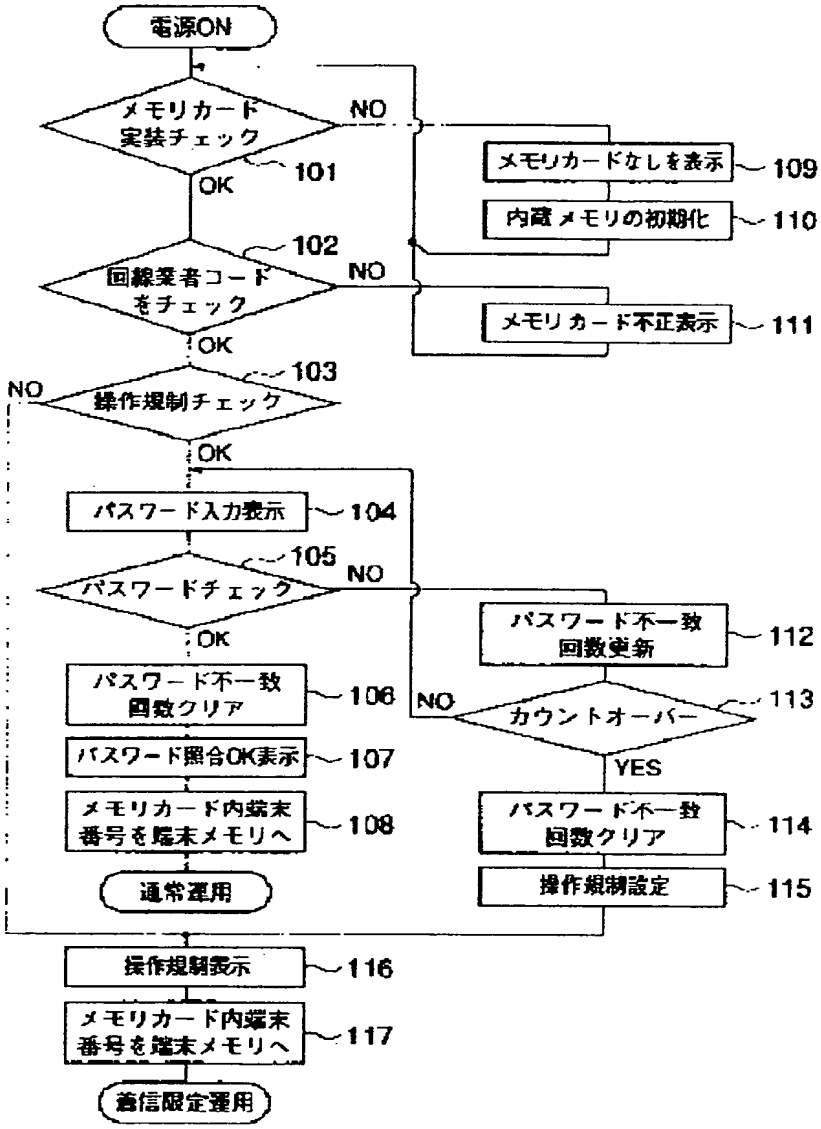
【図８】



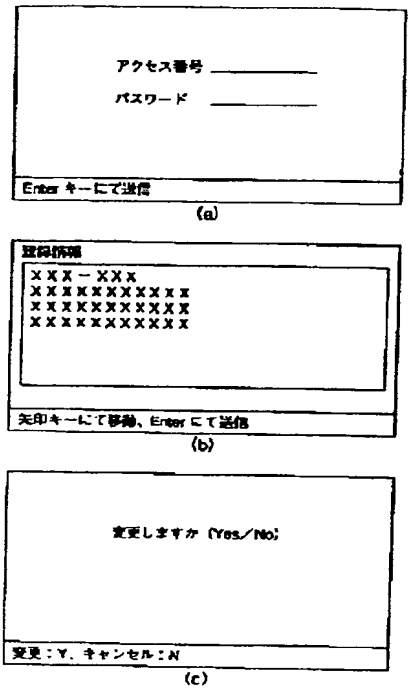
【図９】



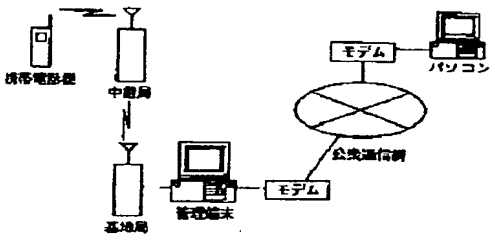
【図７】


電源ON
メモリカード実装チェック
101
NO
OK
メモリカードなしを表示
109
内蔵メモリの初期化
110
102
回線業者コードをチェック
NO
OK
メモリカード不正表示
111
103
NO
操作規制チェック
OK
パスワード入力表示
104
105
パスワードチェック
NO
OK
パスワード不一致回数更新
112
パスワード不一致回数クリア
106
NO
カウントオーバー
113
パスワード照合OK表示
107
YES
メモリカード内端末番号を端末メモリへ
108
パスワード不一致回数クリア
114
通常運用
操作規制設定
115
操作規制表示
116
メモリカード内端末番号を端末メモリへ
117
着信限定運用

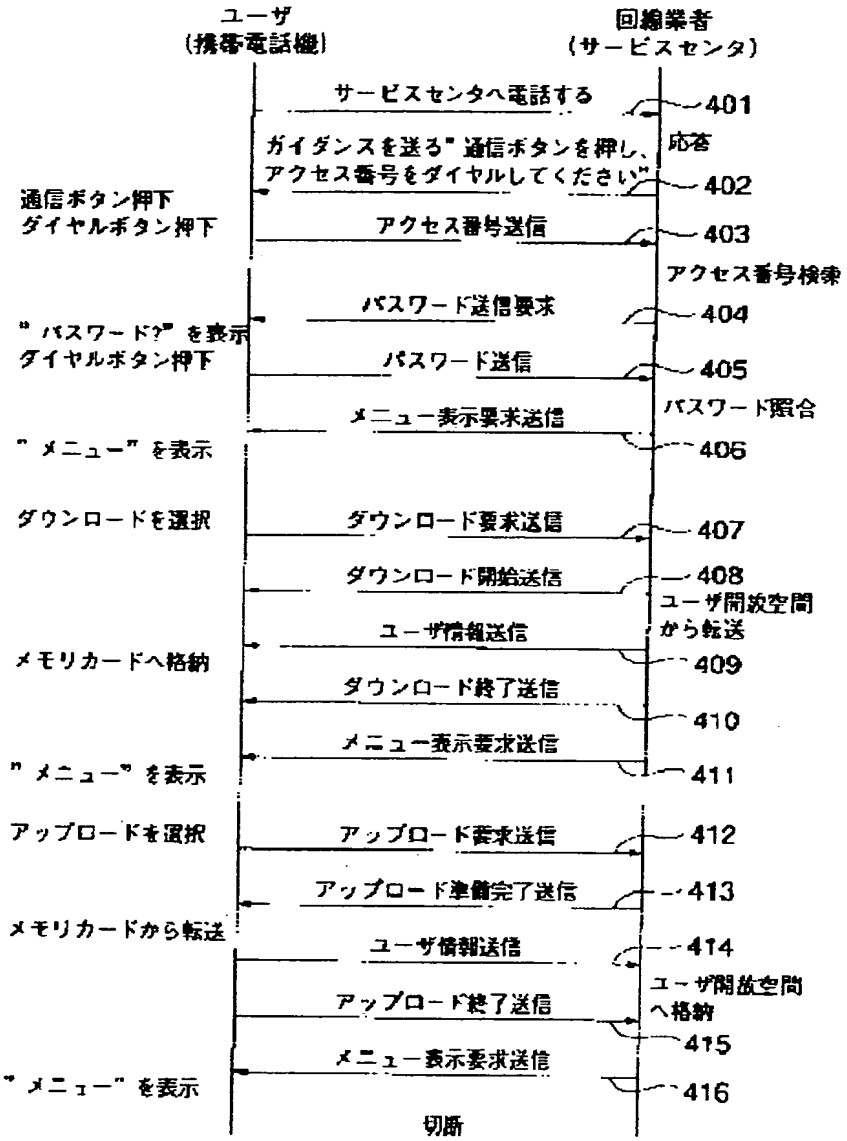
【図１５】


アクセス番号
パスワード
Enter キーにて送信
(a)
XXX－XXX
XXXXXXXXXXX
XXXXXXXXXXX
XXXXXXXXXXX
矢印キーにて移動、Enter にて送信
(b)
変更しますか (Yes/No)
変更：Y、キャンセル：N
(c)

【図１３】


携帯電話機
中継局
基地局
管理端末
モデム
パソコン
公衆通信網
モデム

【図１１】


ユーザ
(携帯電話機)
回線業者
(サービスセンタ)
サービスセンタへ電話する
401
ガイダンスを送る" 通信ボタンを押し、
アクセス番号をダイヤルしてください"
応答
402
通信ボタン押下
ダイヤルボタン押下
アクセス番号送信
403
アクセス番号検索
パスワード送信要求
404
" パスワード?" を表示
ダイヤルボタン押下
パスワード送信
405
パスワード照合
メニュー表示要求送信
406
" メニュー" を表示
ダウンロードを選択
ダウンロード要求送信
407
ダウンロード開始送信
408
ユーザ開放空間
から転送
ユーザ情報送信
409
メモリカードへ格納
ダウンロード終了送信
410
メニュー表示要求送信
411
" メニュー" を表示
アップロードを選択
アップロード要求送信
412
アップロード準備完了送信
413
メモリカードから転送
ユーザ情報送信
414
ユーザ開放空間
へ格納
アップロード終了送信
415
メニュー表示要求送信
" メニュー" を表示
416
切断

【図１２】

	0	1	2	3	4	5	6	7	8	9
0	A	B	C	D	E	F	G	H	I	J
1	K	L	M	N	O	P	Q	R	S	T
2	U	V	W	X	Y	Z				
3	a	b	c	d	e	f	g	h	i	j
4	k	l	m	n	o	p	q	r	s	t
5	u	v	w	x	y	z				
6	!	"	#	$	%	&	(	)		
7	<	>	+	*	−	/	=			
8	@	;	:							スペース
9	0	1	2	3	4	5	6	7	8	9

(a) アルファベット変換図

	0	1	2	3	4	5	6	7	8	9
0	ア	イ	ウ	エ	オ	マ	ミ	ム	メ	て
1	カ	キ	ク	ケ	コ	ヤ		ユ		ヨ
2	サ	シ	ス	セ	ソ	ラ	リ	ル	レ	ロ
3	タ	チ	ツ	テ	ト	ワ				ン
4	ナ	ニ	ヌ	ネ	ノ					
5	ハ	ヒ	フ	ヘ	ホ					
6	!	"	#	$	%	&	(	)		
7	<	>	+	*	−	/	=			
8	@	;	:							スペース
9	0	1	2	3	4	5	6	7	8	9

(b) カタカナ変換図

	0	1	2	3	4	5	6	7	8	9
0	あ	い	う	え	お	ま	み	む	め	も
1	か	き	く	け	こ	や		ゆ		よ
2	さ	し	す	せ	そ	ら	り	る	れ	ろ
3	た	ち	つ	て	と	わ				ん
4	な	に	ぬ	ね	の					
5	は	ひ	ふ	へ	ほ					
6	!	"	#	$	%	&	(	)		
7	<	>	+	*	−	/	=			
8	@	;	:							スペース
9	0	1	2	3	4	5	6	7	8	9

(c) ひらかな変換図

#	00	*	アルファベット表示
#	01	*	カタカナ表示
#	02	*	ひらかな表示
#	03	*	
#	04	*	
#	05	*	メニュー表示要求
#	06	*	
#	07	*	
#	08	*	
#	09	*	

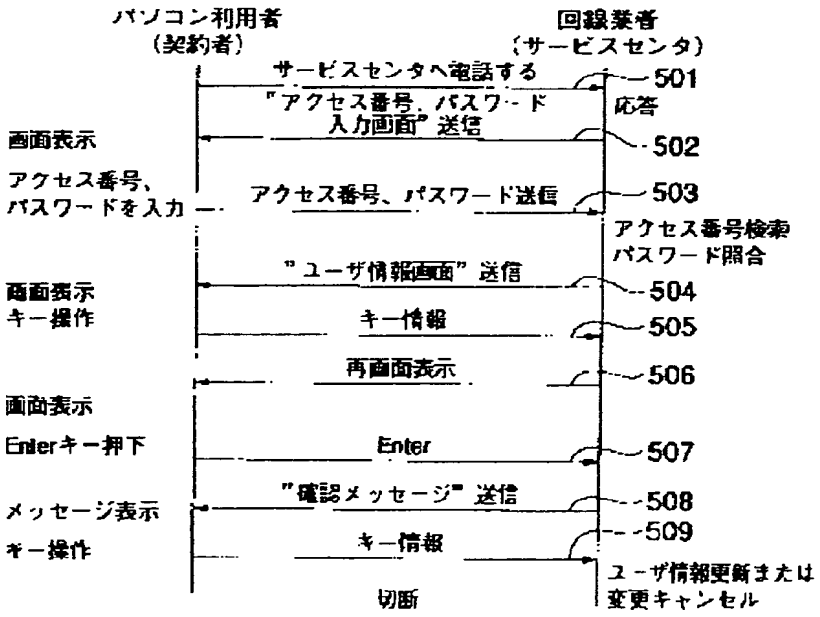
(d) システム情報コード図

*	10	*	
*	11	*	ダウンロード要求
*	12	*	ダウンロード開始
*	13	*	ダウンロード終了
*	14	*	アップロード要求
*	15	*	アップロード準備完了
*	16	*	アップロード終了
*	17	*	アクセス番号送信
*	18	*	パスワード入力要求
*	19	*	パスワード送信

(e) システム情報コード図

注：網掛け部分は押しボタン
ダイヤル番号を表す

【図１４】


パソコン利用者
(契約者)
回線業者
(サービスセンタ)
サービスセンタへ電話する
501
応答
"アクセス番号、パスワード
入力画面" 送信
画面表示
502
アクセス番号、
パスワードを入力
アクセス番号、パスワード送信
503
アクセス番号検索
パスワード照合
"ユーザ情報画面" 送信
504
画面表示
キー操作
キー情報
505
再画面表示
506
画面表示
Enterキー押下
Enter
507
"確認メッセージ" 送信
508
メッセージ表示
キー操作
キー情報
509
ユーザ情報更新または
変更キャンセル
切断

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2000-174894
(43)Date of publication of application : 23.06.2000

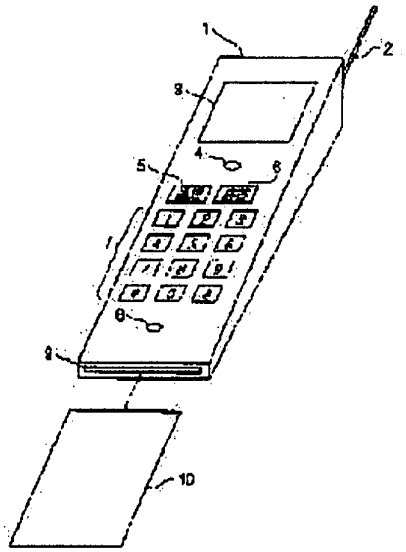
(51)Int.Cl. H04M 1/675
H04M 1/66

(21)Application number : 10-345979
(22)Date of filing : 04.12.1998

(71)Applicant : HITACHI TELECOM TECHNOL LTD
(72)Inventor : ITO SHIGEKI

(54) PORTABLE TELEPHONE SET

(57)Abstract:
PROBLEM TO BE SOLVED: To prevent illegal use by storing a password to a memory card and collating the password with a password entered from a portable telephone set by the user.
SOLUTION: This portable telephone set 1 and a memory card 10 storing system information and user information are separated and managed differently, and a password is set to the memory card. When a password entered from the portable telephone set 1 does not match the password set in the memory card, dialing and browsing of the user information are stopped.



LEGAL STATUS

[Date of request for examination] 05.03.2003

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number] 3788700

[Date of registration] 07.04.2006

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

CLAIMS

[Claim(s)]

[Claim 1] The portable telephone characterized by having a wearing means to equip with the memory card which memorizes the system information containing a circuit vendor number and a terminal number, a reading means to read this circuit vendor number and a terminal number, and the sending-and-receiving control means that performs sending and receiving by said circuit vendor number and said terminal number at least.

[Claim 2] The portable telephone according to claim 1 characterized by having the connecting means connected to the server which carries out information management in the condition of having been equipped with said memory card, and a data transceiver means to perform informational upload and download between the predetermined rooms of said server.

[Claim 3] Said data transceiver means is a portable telephone according to claim 2 characterized by for other terminal units having the function which downloads the information stored in said predetermined room, and writing the downloaded information concerned in said memory card.

[Claim 4] The portable telephone characterized by having the control means to which sending-and-receiving actuation is permitted only when a storage means to memorize the password defined beforehand in the portable telephone in which sending and receiving are possible, an input means to enter a password, and the password memorized by said storage means and the password which the user entered from said input means correspond.

[Claim 5] It is the portable telephone according to claim 4 which is equipped with a wearing means to equip with the memory card which memorizes the password defined beforehand, and is characterized by said control means permitting sending-and-receiving actuation only when the password which said user entered, and the password memorized by said memory card correspond.

[Claim 6] In the portable telephone which can set up the sending-and-receiving mode of operation in which dispatch and arrival are possible at least, and the arrival-of-the-mail mode of operation for which a message can only be received A storage means to memorize the password defined beforehand, and an input means to enter a password, A judgment means to judge the response relation between the password memorized by said storage means and the password which the user entered from said input means, The portable telephone characterized by having a mode-of-operation setting-out means to set it as said arrival-of-the-mail mode when the password into which said judgment means was inputted from said input means, and the password memorized by said storage means do not correspond more than the count set up beforehand.

[Claim 7] It is the portable telephone according to claim 6 which is equipped with a wearing means to equip with the memory card which memorizes the password defined beforehand, and is characterized by said judgment means judging the response relation between the password which said user entered, and the password memorized by said memory card.

[Claim 8] A detection means to detect the condition of not operating it, in the portable telephone in which sending and receiving are possible, When a storage means to memorize the password defined beforehand, an input means to enter a password, and said detection means judge it as the condition of not operating it The portable telephone which changes into the condition of the waiting for a password input, and is characterized by having the control means to which dispatch or arrival-of-the-mail actuation is permitted only when the password memorized by said storage means and the password which the user entered from said input means correspond.

[Claim 9] It is the portable telephone according to claim 8 which is equipped with a wearing means to equip with the memory card which memorizes the password defined beforehand, and is characterized by said control means permitting dispatch or arrival-of-the-mail actuation only when the password which said user entered, and the password memorized by said memory card correspond.

[Claim 10] Said detection means is a portable telephone according to claim 8 or 9 which is an actuation detection means to detect the oscillating detection means or the condition of not operating it of detecting a vibrational state, and is characterized by judging with the condition of not operating it when the condition of quiescence or not operating it carries out predetermined time continuation.

[Translation done.]

DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Field of the Invention] This invention relates to the portable telephone with which a call is performed through a wireless circuit.
[0002]
[Description of the Prior Art] Conventionally, system information and User Information were memorized in the memory built in the portable telephone.
[0003] Moreover, performing a check of a principal with a password was not performed.
[0004]
[Problem(s) to be Solved by the Invention] However, since system information was memorized by the internal memory of a portable telephone, the memory by the telephone carrier needed to be rewritten and the above conventional methods took time and effort and time amount to it, also when buying with a new portable telephone.
[0005] Especially this so-called watch shift that exchanges a portable telephone, without changing especially a terminal number took time and effort and time amount.
[0006] Moreover, since memory with a built-in portable telephone was used also for storage of User Information, reinput was required whenever it bought a new portable telephone.
[0007] When User Information became large, there was also a problem that insufficient memory arose, in an internal memory.
[0008] Since it did not succeed in the consideration to protection of security, for example, installation of a password, the current portable telephone also had the problem that the unjust dispatch by the third party was possible, and User Information could be seen, when a portable telephone included a third party's hand.
[0009]

[Means for Solving the Problem] In order to solve the above-mentioned technical problem, invention according to claim 1 is characterized by having a wearing means to equip with the memory card which memorizes the system information containing a circuit vendor number and a terminal number, a reading means to read this circuit vendor number and a terminal number, and the sending-and-receiving control means that performs sending and receiving by said circuit vendor number and said terminal number at least.
[0010] According to this invention, even if it exchanges a portable telephone, it functions by carrying out the wearing substitute of the memory card as a portable telephone of the circuit vendor number memorized by the memory card and a terminal number.
[0011] The portable telephone of this invention according to claim 2 is characterized by having the connecting means connected to the server which carries out information management in the condition of having been equipped with said memory card, and a data transceiver means to perform informational upload and download between the predetermined rooms of said server in invention according to claim 1.
[0012] According to this invention, a portable telephone can transmit and receive data between servers.
[0013] The portable telephone of this invention according to claim 3 is characterized by for said data transceiver means having the function in which other terminal units download the information stored in said predetermined room, and writing the downloaded information concerned in said memory card in invention according to claim 2.
[0014] According to this invention, a portable telephone can download the data of other terminal units through a server, and can write them in a memory card.
[0015] The portable telephone of this invention according to claim 4 is characterized by to have the control means to which sending-and-receiving actuation is permitted, only when a storage means to memorize the password defined beforehand in the portable telephone in which sending and receiving are possible, an input means to enter a password, and the password memorized by said storage means and the password which the user entered from said input means correspond.
[0016] According to this invention, since the activity of a password is attained, the unauthorized use by others of a portable telephone can be prevented.
[0017] The portable telephone of this invention according to claim 5 is equipped with a wearing means to equip with the memory card which memorizes the password defined beforehand in invention according to claim 4, and said control means is characterized by permitting sending-and-receiving actuation, only when the password which said user

entered, and the password memorized by said memory card correspond.
[0018] According to this invention, since the password is memorized by the memory card, security is held even if it exchanges a portable telephone.
[0019] In the portable telephone with which the sending-and-receiving mode of operation in which dispatch and arrival are possible at least, and the arrival-of-the-mail mode of operation for which a message can only be received can set up the portable telephone of this invention according to claim 6 A storage means to memorize the password defined beforehand, and an input means to enter a password, A judgment means to judge the response relation between the password memorized by said storage means and the password which the user entered from said input means, When the password into which said judgment means was inputted from said input means, and the password memorized by said storage means do not correspond more than the count set up beforehand, it is characterized by having a mode-of-operation setting-out means to set it as said arrival-of-the-mail mode.
[0020] Since according to this invention it can be set as arrival-of-the-mail mode when inputted more than the count as which the password memorized by the portable telephone and the not corresponding password were determined beforehand, the unjust dispatch by the third party can be prevented.
[0021] The portable telephone of this invention according to claim 7 is equipped with a wearing means to equip with the memory card which memorizes the password defined beforehand in invention according to claim 6, and said judgment means is characterized by judging the response relation between the password which said user entered, and the password memorized by said memory card.
[0022] Since the password is memorized by the memory card, as long as the memory card is being kept according to this invention, the unjust dispatch by the third party from a portable telephone can be prevented.
[0023] In the portable telephone in which the sending and receiving of the portable telephone of this invention according to claim 8 are possible When a storage means to memorize the password beforehand determined as a detection means to detect the condition of not operating it, an input means to enter a password, and said detection means judge it as the condition of not operating it It changes into the condition of the waiting for a password input, and only when the password memorized by said storage means and the password which the user entered from said input means correspond, it is characterized by having the control means to which sending-and-receiving actuation is permitted.
[0024] Since according to this invention it will not be in an usable condition if a password is not entered when a portable telephone is judged un-operating

it, it forgets, and the unauthorized use in the case of a theft etc. can be prevented or mitigated.
[0025] The portable telephone of this invention according to claim 9 is equipped with a wearing means to equip with the memory card which memorizes the password defined beforehand in invention according to claim 8, and said control means is characterized by permitting sending-and-receiving actuation, only when the password which said user entered, and the password memorized by said memory card correspond.
[0026] According to this invention, when a portable telephone is judged un-operating it, even if the portable telephone is equipped with the memory card, the unauthorized use by the third party can be prevented or mitigated.
[0027] In invention according to claim 8 or 9, said detection means is an actuation detection means to detect the oscillating detection means or the condition of not operating it of detecting a vibrational state, and the portable telephone of this invention according to claim 10 is characterized by judging with the condition of not operating it, when the condition of quiescence or not operating it carries out predetermined time continuation.
[0028] According to this invention, since the condition of quiescence or not operating it judges with the condition of not operating it when predetermined carries out time amount continuation, it forgets and the effectiveness of prevention of the unauthorized use by the third party in the case of a theft etc. or relief becomes large much more.
[0029]
[Embodiment of the Invention] the external view of the portable telephone according [drawing 1] to the gestalt of operation of this invention -- it is -- 1 -- the body of a portable telephone, and 2 -- an antenna and 3 -- the information-display section and 4 -- for a response carbon button and 7, as for a microphone (telephone transmitter) and 9, a dial carbon button group and 8 are [a loudspeaker (earphone) and 5 / a data communication carbon button and 6 / memory card insertion opening and 10] memory cards.
[0030] Drawing 2 is a thing illustrating the content of the information which a memory card is made to memorize, and has the circuit vendor number and terminal number (telephone number) which offer cell phone service, a password, a count of a password inequality, actuation regulation information, etc. as system information.
[0031] As User Information, there are telephone information (Electronic Directory), memorandum information, etc.
[0032] Drawing 3 is the block block diagram of a portable telephone 1, as for the microphone (telephone transmitter) of drawing 1 , and 10, the loudspeaker (earphone) of drawing 1 and 8 are the same, and 4 is the memory card of drawing 1 .
[0033] 11 is a display circuit to display a PB-signal transmitter and 13 on a

key stroke detector, and for a push button dial signal receiver (for a PB-signal receiver and a following push button dial to be called PB for short) and 12 display 14 on the information-display section 3 of drawing 1 .

[0034] The receiving selector to which 15 changes the output destination change of an input signal, the transmitting selector to which 16 changes the input place of a sending signal, and 17 are central-process units (it is hereafter called CPU for short) which control the whole portable telephone.

[0035] A sending circuit for the wireless circuit where 20 performs reception of an electric wave and transmission, the receiving circuit which operates orthopedically the information which 18 received in the wireless circuit 20, and 19 to wireless-ize transmit information, and 21 are oscillating detectors which detect an oscillation of a portable telephone.

[0036] In drawing 3 , the part except a memory card 10 is the portable telephone 1 said by this invention. Therefore, a memory card 10 is inserted in a portable telephone 1, and the function of the conventional portable telephone is demonstrated.

[0037] Drawing 4 shows the user of a portable telephone in the gestalt of operation of this invention, the dealer of a portable telephone, and the relation of the telephone carrier who offers cell phone service.

[0038] A user contracts the activity agreement of cell phone service with a telephone carrier. A telephone carrier writes a circuit vendor number, a terminal number, a password, etc. in a memory card, clears the count of a password inequality, and hands a user the memory card which canceled actuation regulation.

[0039] On the other hand, a telephone carrier records the data of the same content as a memory card on the database of an administration terminal, as shown in drawing 5 . A access number is a number for accessing to user disconnection room here, when lending and using memory service.

[0040] The user who received the memory card 10 goes to a dealer, purchases the portable telephone 1 which can use the memory card 10 received from the telephone carrier, and receives a portable telephone 1.

[0041] A user inserts a memory card 10 in the purchased portable telephone 1, and if a password is entered, he will become usable.

[0042] If the physical and electric interface of a memory card 10 and a portable telephone 1 is unified among all telephone carriers, a user has the effectiveness which can choose which model of every manufacturer freely. Therefore, the change of the model of portable telephone 1 also becomes free.

[0043] Drawing 6 is what showed the typical screen displayed on the information-display section 3 of a portable telephone 1, and they are the screen where drawing 6 (a) requires the input of a password, the screen in which it is shown that the entered password was [drawing 6 (b)] right, and the screen where, as for drawing 6 (c), the circuit vendor number in a memory card and the circuit vendor number of the internal memory of a portable telephone 1 display an inharmonious thing.

[0044] The screen and drawing 6 (f) which show that this portable telephone 1 became arrival of the mail only when inharmonious are a menu screen in the case of carrying out a service center and data communication more than the count of a convention of the screen where drawing 6 (d) indicates that the memory card is not inserted, the password which drawing 6 (e) entered, and the password of a memory card.

[0045] The flow chart shown in drawing 7 explains initial setting of the power up of a portable telephone 1.

[0046] The charge of a power source checks mounting of a memory card 10 first (step 101).

[0047] If the memory card 10 is mounted, the circuit vendor number in a memory card 10 and the circuit vendor number registered into the internal memory of a portable telephone 1 will be collated (step 102).

[0048] If the circuit vendor number is in agreement, the actuation regulation information in a memory card 10 will be checked (step 103).

[0049] If actuation regulation is canceled, message drawing 6 (a) which requires the input of a password will be displayed on the information-display section 3 (step 104).

[0050] A user operates the dial carbon button group 7 of drawing 1 , and if the password decided by the agreement with a telephone carrier is entered, it will check with the password in a memory card 10 (step 105).

[0051] When a password is in agreement, the count of a password inequality in a memory card 10 is cleared (step 106), and the password collating O.K. shown in drawing 6 (b) is displayed on the information-display section 3 (step 107).

[0052] After completing collating of a password, the terminal number in a memory card (telephone number) is registered into the built-in memory area of a portable telephone 1 (step 108), it becomes the portable telephone 1 of this terminal number henceforth, and the arrival to this terminal number is received.

[0053] In this condition, an employment condition, a call, the dispatch from this portable telephone, and arrival are attained, and read-out and modification of User Information are also usually attained.

[0054] When a memory card 10 has not been mounted with a power source ON, as shown in drawing 6 (d), those without a memory card are displayed on the information-display section 3 (step 109).

[0055] At this time, arrival of the mail also becomes impossible by that (step 110) which clears the terminal number registered into the internal memory of a portable telephone 1.

[0056] Usually, mounting of a memory card 10 is supervised also in the state of employment, if it detects that the memory card 10 is not mounted, the terminal number registered into the internal memory of a portable telephone 1 will be cleared, and future arrival will not be received.
[0057] At step 102, when the circuit vendor number in a memory card 10 and the circuit vendor number in memory with a built-in portable telephone are inharmonious, the memory card unjust display shown in drawing 6 (c) is displayed on the information-display section 3 (step 111), and it waits for insertion of a normal memory card.
[0058] When the password which the user entered is the password and inequality in a memory card 10, the count of a password inequality in a memory card 10 is updated (step 112), and if the count of a password inequality has not become the count of a convention (value set as memory with a built-in portable telephone), the password input request of drawing 6 (a) is displayed on the information-display section 3 (step 104).
[0059] When the count of a password inequality becomes the count of a convention, the count of a password inequality in a memory card 10 is cleared (step 114), and the actuation regulation information in a memory card is set as regulation (step 115).
[0060] When it becomes actuation regulation in the count over of a password inequality, and when it becomes clear that actuation regulation is carried out with the actuation regulation check of step 103, the actuation of those other than response carbon button 6 of drawing 1 is regulated, and an actuation regulation indication of drawing 6 (e) is given to the information-display section 3 (step 116).
[0061] And the terminal number in a memory card 10 is registered into the internal memory of a portable telephone 1 (step 117), and only arrival of the mail is henceforth received as a portable telephone of this terminal number.
[0062] With the gestalt of operation of the above this invention, when functioning on the portable telephone 1 purchased from the dealer as a portable telephone as usual by inserting the memory card 10 which the telephone carrier published, a user can perform the change with another portable telephone without agreement modification with a telephone carrier.
[0063] When a portable telephone is lost or a theft is encountered, it becomes by also being able to telephone freely, if it is the conventional one apparatus portable telephone, it having been possible to have seen individual humanity news like Electronic Directory, and dissociating in addition to the time of an activity, and keeping it, if a portable telephone 1 and a memory card 10 are separable like this invention, without being made to pay loss and phonecall charges excessive also in the case of a theft.
[0064] Loss of the portable telephone 1 with memory card 10 is considered [being based on mislaying in many cases, and]. With the gestalt of operation

of this invention, in order to prevent the unauthorized use by others resulting from mislaying, the oscillating detector 21 of drawing 3 was formed.
[0065] Namely, the oscillating detector 21 detects an oscillation of a portable telephone 1, CPU17 monitors a detection result continuously, and when the condition (condition in which the portable telephone stood it still) that there is no fixed time amount oscillation continues or actuation of what is not carried out during 1 scheduled time, either, as shown in drawing 8 , a portable telephone 1 is changed into the condition of the waiting for a password input (step 201).
[0066] In the condition of the waiting for a password input, the function of a portable telephone is limited only to arrival of the mail.
[0067] When a user uses a portable telephone 1 in this condition, actuation according to the flow chart shown in drawing 9 is carried out.
[0068] That is, if a key stroke is performed, it will judge whether it is a response carbon button (step 301), and if it is not a response carbon button, it will judge whether it is the waiting for a password input (step 302).
[0069] If it is the waiting for a password input, the message shown in drawing 6 (a) will be displayed on the information-display section 3 (step 303), and the input of a password will be demanded from a user.
[0070] Response processing will be performed if it is actuation of a response carbon button at step 301 (step 305).
[0071] A key stroke will be received if it is not in the condition of the waiting for a password input at step 302 (i.e., if it is in the condition that the password is already entered) (step 304).
[0072] In the gestalt of operation of this invention, the service of memory on hire whose telephone carrier lends a user a part of memory of an administration terminal is possible.
[0073] Service of memory on hire is aimed at compensating lack of the User Information storing memory in a portable telephone 1 by the increment in User Information, and offering the place for safekeeping of User Information in a portable telephone 1.
[0074] A user contracts with a telephone carrier and gets a server access number from a telephone carrier.
[0075] A telephone carrier registers User Information into the database shown in the server in a service center at drawing 5 .
[0076] The management information of existence ** of a terminal number, a contractor name, a password, and service of memory on hire and the memory area opened to a user are written in a database.
[0077] A portable telephone 1 and a service center are connected through radio via a base transceiver station or a radio relay station, as shown in drawing 13 .
[0078] Outline system configuration drawing of this service to drawing 10 is

shown.

[0079] A user calls a service center from a portable telephone 1, makes it a talk state, and exchanges User Information. It calls it upload to transmit User Information for transmitting User Information to download and a server from a portable telephone 1 to a portable telephone 1 from a server.

[0080] In download, User Information is put on an electric wave, and delivery and a portable telephone 1 store in a portable telephone 1 from a server User Information received to the memory card 10.

[0081] In upload, User Information of the memory card 10 in a portable telephone 1 is read, it puts it on an electric wave, and is transmitted to a server.

[0082] An exchange of the signal between User Information and a portable telephone 1, and a service center is performed in code which combined the PB signal.

[0083] An example of conversion of a PB signal and various codes is shown in drawing 12 . A code is classified into the User Information code and a system-information code, is drawing 12 (a) (b) (c) ** User Information code-conversion drawing, expresses the alphabet, katakana, a hiragana, and a notation with double digits, and takes the form of "#XX*" in drawing 12 (d), (e), and ** system-information code.

[0084] User Information is coded combining 0-two 9. For example, User Information 0123 in a portable telephone 1 is changed into the PB signal of the alphabet display code "#00*" plus 90919293, and is put and sent to an electric wave. Moreover, the PB signal of "#00*90919293" which the portable telephone 1 received is transposed to 0123, and is stored in a memory card 10 as User Information.

[0085] System information is expressed by the PB signal of 4 figures of "#XX*." Therefore, the PB signal sent to the degree of "#00*" is changed using alphabet conversion drawing of drawing 12 (a).

[0086] Actuation of download and upload is explained using the sequence chart of drawing 11 .

[0087] A user telephones a service center (step 401). In a service center, the voice guidance which answers this and is referred to as "Dial push and a access number for a communication link carbon button" is sent (step 402).

[0088] It is received in the wireless circuit 20 of a portable telephone 1, and this electric wave is sent to a loudspeaker 4 through a receiving circuit 18 and the receiving selector 15, and tells a user said guidance.

[0089] The user who heard guidance pushes a communication link carbon button, and, thereby, CPU17 of drawing 3 changes the receiving selector 15 and the transmitting selector 16 to the PB-signal receiver 11 and PB-signal transmitter 12 side, respectively.

[0090] Then, if a dial carbon button is pushed and a access number 'XXXXX' is inputted, it is detected in the key stroke detector 13, and is notified to CPU17, and CPU17 adds a system-information code "#17*" to a head, and directs sending out of "#17*XXXXX" to the PB-signal transmitter 12. The coded PB signal is sent to a service center through radio via the transmitting selector 16, a sending circuit 19, and the wireless circuit 20 (step 403).

[0091] If 'XXXXX' is searched with a service center from the database in a server of drawing 5 among the received access number codes "#17*XXXXX" and there are congruous things, the PB signal of a password Request to Send "#18*" will be transmitted to a portable telephone 1 (step 404). A communication link is cut if not in agreement.

[0092] A password Request-to-Send signal "#18*" is received in the wireless circuit 20, it is sent to CPU17 in the path of a receiving circuit 18, the receiving selector 15, and the PB-signal receiver 11, and CPU17 displays "password ?" of drawing 6 (a) on the information-display section 3.

[0093] If a user pushes a dial carbon button and enters a password 'YYYYY', it will be changed into a PB signal "#19*YYYYY", and a password will be transmitted to a service center in the same actuation as the case of a access number (step 405).

[0094] In a service center, if 'YYYYY' is collated with the database in a server of drawing 5 among passwords "#19*YYYYY" and there are congruous things, a menu display demand signal "#05*" will be transmitted to a portable telephone 1 (step 406). A communication link will be cut if there are no congruous things.

[0095] In a portable telephone 1, CPU17 recognizes this, directs to the display circuit 14 of drawing 3 , and gives a menu indication of drawing 6 (f) to the information-display section 3.

[0096] If a user pushes a dial carbon button "2" and chooses download, by CPU17, it will be changed into a PB signal "#11*", and will be transmitted to a service center (step 407).

[0097] In a service center, after preparing download and transmitting a download start signal "#12*" to a portable telephone 1 (step 408), the information on the room opened by this user is changed according to conversion drawing of drawing 12 , and it transmits to a portable telephone 1 as User Information (step 409).

[0098] In a portable telephone 1, the PB signal after receiving a download start signal "#12*" is transformed inversely to original User Information according to conversion drawing of drawing 12 , and it stores in a memory card 10.

[0099] Inverse transformation of a PB signal and the writing to a memory card 10 are performed until it receives a download terminate signal "#13*" from a service center.

[0100] In a service center, if download of User Information of the user open

space in a service center is finished, a download terminate signal "#13*" will be transmitted (step 410).

[0101] Then, since a menu display demand signal "#05*" is sent again (step 411), with a portable telephone 1, the menu of drawing 6 (f) is displayed on the information-display section 3 by control of CPU17.

[0102] If a user pushes a dial carbon button "1" and chooses upload in this condition, by CPU17, it will be changed into a upload demand signal "#14*", and will be transmitted to a service center (step 412).

[0103] In a service center, after receiving a upload demand signal "#14*", reception preparations of upload information are made and a upload preparation-completion signal "#15*" is transmitted to a portable telephone 1 (step 413).

[0104] In the portable telephone 1 which received this signal, User Information is read from a memory card 10, conversion Fig. **** conversion of drawing 12 is carried out, and it transmits to a service center as User Information (step 414).

[0105] In a service center, the PB signal which received is coded according to conversion drawing of drawing 12 , and User Information is stored in the room opened by this user that shows drawing 5 .

[0106] Conversion of a PB signal and the writing of a code are performed until it receives the upload terminate signal "#16*" from a portable telephone 1.

[0107] A portable telephone 1 transmits a upload terminate signal "#16*" to a service center, after ending upload of User Information in a memory card 10 (step 415).

[0108] If a upload terminate signal "#16*" is received, a service center will transmit a menu display demand signal "#05*" to a portable telephone 1 again (step 416), and will display the menu screen of drawing 6 (f) on the information-display section 3 in a portable telephone 1.

[0109] In a portable telephone 1, if there is also no upload demand and download demand, connection with a service center will be cut.

[0110] The above sequence can perform download to the memory card 10 of the portable telephone 1 of User Information in a service center, and upload to the user open space of the memory in a service center from the memory card 10 of a portable telephone 1.

[0111] With the gestalt of operation of this invention, an informational exchange is written possible by the coding by the PB signal, and even if it does not build circuits, such as a modem, in a portable telephone 1, it can be used as an information terminal.

[0112] When performing data communication with other terminal units (for example, it is called a personal computer and a personal computer for short), it can carry out via a service center.

[0113] In this case, data transfer becomes possible by connecting a modem to the administration terminal of a service center, as shown in drawing 13 , and performing a modem communication link with other terminal units (for example, personal computer).

[0114] Drawing 14 is a sequence chart in case other terminal (personal computer) users are a telephone carrier's registered users. Drawing 14 explains an operating sequence below.

[0115] First, a user telephones a service center (step 501). A modem is trained between the administration terminal of a service center, and a personal computer, and if a synchronization is established, "access number and password input-screen" drawing 15 (a) will be transmitted to a personal computer from a service center (step 502).

[0116] A user enters a access number and a password, pushes an Enter key, and transmits a access number and a password to the administration terminal of a service center (step 503).

[0117] The access number received from the database shown in drawing 5 is searched with an administration terminal, and a password is collated. The access number is registered, and when a password is in agreement, "User Information screen" drawing 15 (b) is transmitted to a personal computer (step 504).

[0118] The User Information screen edits the information registered into the user open space shown in drawing 5 .

[0119] A user can change the information on delivery (step 505) and a screen into an administration terminal for key information by the key stroke. Change information on a screen is performed by carrying out regeneration of the screen from an administration terminal (step 506).

[0120] When modification is completed, an Enter key is pushed with a personal computer and Enter key depression information is sent to an administration terminal (step 507).

[0121] The administration terminal which received Enter key depression information transmits "acknowledgement message" drawing 15 (c) to a personal computer (step 508).

[0122] A user can direct [which changes / or or] in a key stroke whether to carry out cancellation. That is, when changing, the Y key is pressed, a depression and when canceling, the N key is pressed, and it transmits to an administration terminal (step 509).

[0123] An administration terminal is registered into the user open space which shows modification information to drawing 5 by the bottom of Y key press, and registration to the user open space shown in drawing 5 is not performed at the time under N key press.

[0124] Thus, since modification of User Information with a personal computer is possible, a personal computer and a portable telephone 1 can do a

communication link indirectly through a database.
[0125] In addition, a communication link is cut, when the access number is not registered or a password is not in agreement.
[0126]
[Effect of the Invention] If the circuit vendor number which was memorized by the portable telephone according to this invention, and the circuit vendor number in a memory card are in agreement, it has the effectiveness that a portable telephone is freely changeable only by substitution of a memory card.
[0127] Moreover, it has the effectiveness that this watch shift which exchanges a portable telephone, without changing a terminal number can also be performed only by substitution of a memory card.
[0128] Since User Information is memorized by the memory card even if it exchanges a portable telephone, it has the effectiveness that there is no need for reinput.
[0129] Since memory space of a memory card can be enlarged, it has the effectiveness that it is avoidable that the portable telephone internal memories for the User Information storage run short.
[0130] The password is memorized to the memory card and it has the effectiveness that an unauthorized use can be prevented, by collating with the password which the user entered from the portable telephone.
[0131] By keeping a portable telephone and a memory card separately, it has the effectiveness that the unauthorized use at the time of losing a portable telephone or a memory card, or suiting a theft can be prevented.
[0132] It has the effectiveness which can perform an exchange of other terminal units, for example, a personal computer, and data through the room opened by the user of a server.

[Translation done.]

* NOTICES *

TECHNICAL FIELD

[Field of the Invention] This invention relates to the portable telephone with which a call is performed through a wireless circuit.

[Translation done.]

PRIOR ART

[Description of the Prior Art] Conventionally, system information and User Information were memorized in the memory built in the portable telephone.
[0003] Moreover, performing a check of a principal with a password was not performed.

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EFFECT OF THE INVENTION

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[Translation done.]

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TECHNICAL PROBLEM

[Problem(s) to be Solved by the Invention] However, since system information was memorized by the internal memory of a portable telephone, the memory by the telephone carrier needed to be rewritten and the above conventional methods took time and effort and time amount to it, also when buying with a new portable telephone.
[0005] Especially this so-called watch shift that exchanges a portable telephone, without changing especially a terminal number took time and effort and time amount.
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[0008] Since it did not succeed in the consideration to protection of security, for example, installation of a password, the current portable telephone also had the problem that the unjust dispatch by the third party was possible, and User Information could be seen, when a portable telephone included a third party's hand.

[Translation done.]

* NOTICES *

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1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

MEANS

[Means for Solving the Problem] In order to solve the above-mentioned technical problem, invention according to claim 1 is characterized by having a wearing means to equip with the memory card which memorizes the system information containing a circuit vendor number and a terminal number, a reading means to read this circuit vendor number and a terminal number, and the sending-and-receiving control means that performs sending and receiving by said circuit vendor number and said terminal number at least.
[0010] According to this invention, even if it exchanges a portable telephone, it functions by carrying out the wearing substitute of the memory card as a portable telephone of the circuit vendor number memorized by the memory card and a terminal number.
[0011] The portable telephone of this invention according to claim 2 is characterized by having the connecting means connected to the server which carries out information management in the condition of having been equipped with said memory card, and a data transceiver means to perform informational upload and download between the predetermined rooms of said server in invention according to claim 1.
[0012] According to this invention, a portable telephone can transmit and receive data between servers.
[0013] The portable telephone of this invention according to claim 3 is characterized by for said data transceiver means having the function in which other terminal units download the information stored in said predetermined room, and writing the downloaded information concerned in said memory card in invention according to claim 2.
[0014] According to this invention, a portable telephone can download the data of other terminal units through a server, and can write them in a memory card.
[0015] The portable telephone of this invention according to claim 4 is characterized by to have the control means to which sending-and-receiving

actuation is permitted, only when a storage means to memorize the password defined beforehand in the portable telephone in which sending and receiving are possible, an input means to enter a password, and the password memorized by said storage means and the password which the user entered from said input means correspond.
[0016] According to this invention, since the activity of a password is attained, the unauthorized use by others of a portable telephone can be prevented.
[0017] The portable telephone of this invention according to claim 5 is equipped with a wearing means to equip with the memory card which memorizes the password defined beforehand in invention according to claim 4, and said control means is characterized by permitting sending-and-receiving actuation, only when the password which said user entered, and the password memorized by said memory card correspond.
[0018] According to this invention, since the password is memorized by the memory card, security is held even if it exchanges a portable telephone.
[0019] In the portable telephone with which the sending-and-receiving mode of operation in which dispatch and arrival are possible at least, and the arrival-of-the-mail mode of operation for which a message can only be received can set up the portable telephone of this invention according to claim 6 A storage means to memorize the password defined beforehand, and an input means to enter a password, A judgment means to judge the response relation between the password memorized by said storage means and the password which the user entered from said input means, When the password into which said judgment means was inputted from said input means, and the password memorized by said storage means do not correspond more than the count set up beforehand, it is characterized by having a mode-of-operation setting-out means to set it as said arrival-of-the-mail mode.
[0020] Since according to this invention it can be set as arrival-of-the-mail mode when inputted more than the count as which the password memorized by the portable telephone and the not corresponding password were determined beforehand, the unjust dispatch by the third party can be prevented.
[0021] The portable telephone of this invention according to claim 7 is equipped with a wearing means to equip with the memory card which memorizes the password defined beforehand in invention according to claim 6, and said judgment means is characterized by judging the response relation between the password which said user entered, and the password memorized by said memory card.
[0022] Since the password is memorized by the memory card, as long as the memory card is being kept according to this invention, the unjust dispatch by

the third party from a portable telephone can be prevented.
[0023] In the portable telephone in which the sending and receiving of the portable telephone of this invention according to claim 8 are possible When a storage means to memorize the password beforehand determined as a detection means to detect the condition of not operating it, an input means to enter a password, and said detection means judge it as the condition of not operating it It changes into the condition of the waiting for a password input, and only when the password memorized by said storage means and the password which the user entered from said input means correspond, it is characterized by having the control means to which sending-and-receiving actuation is permitted.
[0024] Since according to this invention it will not be in an usable condition if a password is not entered when a portable telephone is judged un-operating it, it forgets, and the unauthorized use in the case of a theft etc. can be prevented or mitigated.
[0025] The portable telephone of this invention according to claim 9 is equipped with a wearing means to equip with the memory card which memorizes the password defined beforehand in invention according to claim 8, and said control means is characterized by permitting sending-and-receiving actuation, only when the password which said user entered, and the password memorized by said memory card correspond.
[0026] According to this invention, when a portable telephone is judged un-operating it, even if the portable telephone is equipped with the memory card, the unauthorized use by the third party can be prevented or mitigated.
[0027] In invention according to claim 8 or 9, said detection means is an actuation detection means to detect the oscillating detection means or the condition of not operating it of detecting a vibrational state, and the portable telephone of this invention according to claim 10 is characterized by judging with the condition of not operating it, when the condition of quiescence or not operating it carries out predetermined time continuation.
[0028] According to this invention, since the condition of quiescence or not operating it judges with the condition of not operating it when predetermined carries out time amount continuation, it forgets and the effectiveness of prevention of the unauthorized use by the third party in the case of a theft etc. or relief becomes large much more.
[0029]
[Embodiment of the Invention] the external view of the portable telephone according [drawing 1] to the gestalt of operation of this invention -- it is -- 1 -- the body of a portable telephone, and 2 -- an antenna and 3 -- the information-display section and 4 -- for a response carbon button and 7, as for a microphone (telephone transmitter) and 9, a dial carbon button group and 8 are [a loudspeaker (earphone) and 5 / a data communication carbon button and 6 / memory card insertion opening and 10] memory cards.
[0030] Drawing 2 is a thing illustrating the content of the information which a memory card is made to memorize, and has the circuit vendor number and terminal number (telephone number) which offer cell phone service, a password, a count of a password inequality, actuation regulation information, etc. as system information.
[0031] As User Information, there are telephone information (Electronic Directory), memorandum information, etc.
[0032] Drawing 3 is the block block diagram of a portable telephone 1, as for the microphone (telephone transmitter) of drawing 1 , and 10, the loudspeaker (earphone) of drawing 1 and 8 are the same, and 4 is the memory card of drawing 1 .
[0033] 11 is a display circuit to display a PB-signal transmitter and 13 on a key stroke detector, and for a push button dial signal receiver (for a PB-signal receiver and a following push button dial to be called PB for short) and 12 display 14 on the information-display section 3 of drawing 1 .
[0034] The receiving selector to which 15 changes the output destination change of an input signal, the transmitting selector to which 16 changes the input place of a sending signal, and 17 are central-process units (it is hereafter called CPU for short) which control the whole portable telephone.
[0035] A sending circuit for the wireless circuit where 20 performs reception of an electric wave and transmission, the receiving circuit which operates orthopedically the information which 18 received in the wireless circuit 20, and 19 to wireless-ize transmit information, and 21 are oscillating detectors which detect an oscillation of a portable telephone.
[0036] In drawing 3 , the part except a memory card 10 is the portable telephone 1 said by this invention. Therefore, a memory card 10 is inserted in a portable telephone 1, and the function of the conventional portable telephone is demonstrated.
[0037] Drawing 4 shows the user of a portable telephone in the gestalt of operation of this invention, the dealer of a portable telephone, and the relation of the telephone carrier who offers cell phone service.
[0038] A user contracts the activity agreement of cell phone service with a telephone carrier. A telephone carrier writes a circuit vendor number, a terminal number, a password, etc. in a memory card, clears the count of a password inequality, and hands a user the memory card which canceled actuation regulation.
[0039] On the other hand, a telephone carrier records the data of the same content as a memory card on the database of an administration terminal, as shown in drawing 5 . A access number is a number for accessing to user disconnection room here, when lending and using memory service.
[0040] The user who received the memory card 10 goes to a dealer,

JP,2000-174894,A [MEANS] http://www4.ipdl.ncipi.go.jp/cgi-bin/tran_web_cgi_ejje

purchases the portable telephone 1 which can use the memory card 10 received from the telephone carrier, and receives a portable telephone 1.
[0041] A user inserts a memory card 10 in the purchased portable telephone 1, and if a password is entered, he will become usable.
[0042] If the physical and electric interface of a memory card 10 and a portable telephone 1 is unified among all telephone carriers, a user has the effectiveness which can choose which model of every manufacturer freely. Therefore, the change of the model of portable telephone 1 also becomes free.
[0043] Drawing 6 is what showed the typical screen displayed on the information-display section 3 of a portable telephone 1, and they are the screen where drawing 6 (a) requires the input of a password, the screen in which it is shown that the entered password was [drawing 6 (b)] right, and the screen where, as for drawing 6 (c), the circuit vendor number in a memory card and the circuit vendor number of the internal memory of a portable telephone 1 display an inharmonious thing.
[0044] The screen and drawing 6 (f) which show that this portable telephone 1 became arrival of the mail only when inharmonious are a menu screen in the case of carrying out a service center and data communication more than the count of a convention of the screen where drawing 6 (d) indicates that the memory card is not inserted, the password which drawing 6 (e) entered, and the password of a memory card.
[0045] The flow chart shown in drawing 7 explains initial setting of the power up of a portable telephone 1.
[0046] The charge of a power source checks mounting of a memory card 10 first (step 101).
[0047] If the memory card 10 is mounted, the circuit vendor number in a memory card 10 and the circuit vendor number registered into the internal memory of a portable telephone 1 will be collated (step 102).
[0048] If the circuit vendor number is in agreement, the actuation regulation information in a memory card 10 will be checked (step 103).
[0049] If actuation regulation is canceled, message drawing 6 (a) which requires the input of a password will be displayed on the information-display section 3 (step 104).
[0050] A user operates the dial carbon button group 7 of drawing 1 , and if the password decided by the agreement with a telephone carrier is entered, it will check with the password in a memory card 10 (step 105).
[0051] When a password is in agreement, the count of a password inequality in a memory card 10 is cleared (step 106), and the password collating O.K. shown in drawing 6 (b) is displayed on the information-display section 3 (step 107).
[0052] After completing collating of a password, the terminal number in a

memory card (telephone number) is registered into the built-in memory area of a portable telephone 1 (step 108), it becomes the portable telephone 1 of this terminal number henceforth, and the arrival to this terminal number is received.
[0053] In this condition, an employment condition, a call, the dispatch from this portable telephone, and arrival are attained, and read-out and modification of User Information are also usually attained.
[0054] When a memory card 10 has not been mounted with a power source ON, as shown in drawing 6 (d), those without a memory card are displayed on the information-display section 3 (step 109).
[0055] At this time, arrival of the mail also becomes impossible by that (step 110) which clears the terminal number registered into the internal memory of a portable telephone 1.
[0056] Usually, mounting of a memory card 10 is supervised also in the state of employment, if it detects that the memory card 10 is not mounted, the terminal number registered into the internal memory of a portable telephone 1 will be cleared, and future arrival will not be received.
[0057] At step 102, when the circuit vendor number in a memory card 10 and the circuit vendor number in memory with a built-in portable telephone are inharmonious, the memory card unjust display shown in drawing 6 (c) is displayed on the information-display section 3 (step 111), and it waits for insertion of a normal memory card.
[0058] When the password which the user entered is the password and inequality in a memory card 10, the count of a password inequality in a memory card 10 is updated (step 112), and if the count of a password inequality has not become the count of a convention (value set as memory with a built-in portable telephone), the password input request of drawing 6 (a) is displayed on the information-display section 3 (step 104).
[0059] When the count of a password inequality becomes the count of a convention, the count of a password inequality in a memory card 10 is cleared (step 114), and the actuation regulation information in a memory card is set as regulation (step 115).
[0060] When it becomes actuation regulation in the count over of a password inequality, and when it becomes clear that actuation regulation is carried out with the actuation regulation check of step 103, the actuation of those other than response carbon button 6 of drawing 1 is regulated, and an actuation regulation indication of drawing 6 (e) is given to the information-display section 3 (step 116).
[0061] And the terminal number in a memory card 10 is registered into the internal memory of a portable telephone 1 (step 117), and only arrival of the mail is henceforth received as a portable telephone of this terminal number.
[0062] With the gestalt of operation of the above this invention, when

functioning on the portable telephone 1 purchased from the dealer as a portable telephone as usual by inserting the memory card 10 which the telephone carrier published, a user can perform the change with another portable telephone without agreement modification with a telephone carrier.

[0063] When a portable telephone is lost or a theft is encountered, it becomes by also being able to telephone freely, if it is the conventional one apparatus portable telephone, it having been possible to have seen individual humanity news like Electronic Directory, and dissociating in addition to the time of an activity, and keeping it, if a portable telephone 1 and a memory card 10 are separable like this invention, without being made to pay loss and phonecall charges excessive also in the case of a theft.

[0064] Loss of the portable telephone 1 with memory card 10 is considered [being based on mislaying in many cases, and]. With the gestalt of operation of this invention, in order to prevent the unauthorized use by others resulting from mislaying, the oscillating detector 21 of drawing 3 was formed.

[0065] Namely, the oscillating detector 21 detects an oscillation of a portable telephone 1, CPU17 monitors a detection result continuously, and when the condition (condition in which the portable telephone stood it still) that there is no fixed time amount oscillation continues or actuation of what is not carried out during 1 scheduled time, either, as shown in drawing 8 , a portable telephone 1 is changed into the condition of the waiting for a password input (step 201).

[0066] In the condition of the waiting for a password input, the function of a portable telephone is limited only to arrival of the mail.

[0067] When a user uses a portable telephone 1 in this condition, actuation according to the flow chart shown in drawing 9 is carried out.

[0068] That is, if a key stroke is performed, it will judge whether it is a response carbon button (step 301), and if it is not a response carbon button, it will judge whether it is the waiting for a password input (step 302).

[0069] If it is the waiting for a password input, the message shown in drawing 6 (a) will be displayed on the information-display section 3 (step 303), and the input of a password will be demanded from a user.

[0070] Response processing will be performed if it is actuation of a response carbon button at step 301 (step 305).

[0071] A key stroke will be received if it is not in the condition of the waiting for a password input at step 302 (i.e., if it is in the condition that the password is already entered) (step 304).

[0072] In the gestalt of operation of this invention, the service of memory on hire whose telephone carrier lends a user a part of memory of an administration terminal is possible.

[0073] Service of memory on hire is aimed at compensating lack of the User Information storing memory in a portable telephone 1 by the increment in

User Information, and offering the place for safekeeping of User Information in a portable telephone 1.

[0074] A user contracts with a telephone carrier and gets a server access number from a telephone carrier.

[0075] A telephone carrier registers User Information into the database shown in the server in a service center at drawing 5 .

[0076] The management information of existence ** of a terminal number, a contractor name, a password, and service of memory on hire and the memory area opened to a user are written in a database.

[0077] A portable telephone 1 and a service center are connected through radio via a base transceiver station or a radio relay station, as shown in drawing 13 .

[0078] Outline system configuration drawing of this service to drawing 10 is shown.

[0079] A user calls a service center from a portable telephone 1, makes it a talk state, and exchanges User Information. It calls it upload to transmit User Information for transmitting User Information to download and a server from a portable telephone 1 to a portable telephone 1 from a server.

[0080] In download, User Information is put on an electric wave, and delivery and a portable telephone 1 store in a portable telephone 1 from a server User Information received to the memory card 10.

[0081] In upload, User Information of the memory card 10 in a portable telephone 1 is read, it puts it on an electric wave, and is transmitted to a server.

[0082] An exchange of the signal between User Information and a portable telephone 1, and a service center is performed in code which combined the PB signal.

[0083] An example of conversion of a PB signal and various codes is shown in drawing 12 . A code is classified into the User Information code and a system-information code, is drawing 12 (a) (b) (c) ** User Information code-conversion drawing, expresses the alphabet, katakana, a hiragana, and a notation with double digits, and takes the form of "#XX*" in drawing 12 (d), (e), and ** system-information code.

[0084] User Information is coded combining 0-two 9. For example, User Information 0123 in a portable telephone 1 is changed into the PB signal of the alphabet display code "#00*" plus 90919293, and is put and sent to an electric wave. Moreover, the PB signal of "#00*90919293" which the portable telephone 1 received is transposed to 0123, and is stored in a memory card 10 as User Information.

[0085] System information is expressed by the PB signal of 4 figures of "#XX*." Therefore, the PB signal sent to the degree of "#00*" is changed using alphabet conversion drawing of drawing 12 (a).

[0086] Actuation of download and upload is explained using the sequence chart of drawing 11 .

[0087] A user telephones a service center (step 401). In a service center, the voice guidance which answers this and is referred to as "Dial push and a access number for a communication link carbon button" is sent (step 402).

[0088] It is received in the wireless circuit 20 of a portable telephone 1, and this electric wave is sent to a loudspeaker 4 through a receiving circuit 18 and the receiving selector 15, and tells a user said guidance.

[0089] The user who heard guidance pushes a communication link carbon button, and, thereby, CPU17 of drawing 3 changes the receiving selector 15 and the transmitting selector 16 to the PB-signal receiver 11 and PB-signal transmitter 12 side, respectively.

[0090] Then, if a dial carbon button is pushed and a access number 'XXXXX' is inputted, it is detected in the key stroke detector 13, and is notified to CPU17, and CPU17 adds a system-information code "#17*" to a head, and directs sending out of "#17*XXXXX" to the PB-signal transmitter 12. The coded PB signal is sent to a service center through radio via the transmitting selector 16, a sending circuit 19, and the wireless circuit 20 (step 403).

[0091] If 'XXXXX' is searched with a service center from the database in a server of drawing 5 among the received access number codes "#17*XXXXX" and there are congruous things, the PB signal of a password Request to Send "#18*" will be transmitted to a portable telephone 1 (step 404). A communication link is cut if not in agreement.

[0092] A password Request-to-Send signal "#18*" is received in the wireless circuit 20, it is sent to CPU17 in the path of a receiving circuit 18, the receiving selector 15, and the PB-signal receiver 11, and CPU17 displays "password ?" of drawing 6 (a) on the information-display section 3.

[0093] If a user pushes a dial carbon button and enters a password 'YYYYY', it will be changed into a PB signal "#19*YYYYY", and a password will be transmitted to a service center in the same actuation as the case of a access number (step 405).

[0094] In a service center, if 'YYYYY' is collated with the database in a server of drawing 5 among passwords "#19*YYYYY" and there are congruous things, a menu display demand signal "#05*" will be transmitted to a portable telephone 1 (step 406). A communication link will be cut if there are no congruous things.

[0095] In a portable telephone 1, CPU17 recognizes this, directs to the display circuit 14 of drawing 3 , and gives a menu indication of drawing 6 (f) to the information-display section 3.

[0096] If a user pushes a dial carbon button "2" and chooses download, by CPU17, it will be changed into a PB signal "#11*", and will be transmitted to a service center (step 407).

[0097] In a service center, after preparing download and transmitting a download start signal "#12*" to a portable telephone 1 (step 408), the information on the room opened by this user is changed according to conversion drawing of drawing 12 , and it transmits to a portable telephone 1 as User Information (step 409).

[0098] In a portable telephone 1, the PB signal after receiving a download start signal "#12*" is transformed inversely to original User Information according to conversion drawing of drawing 12 , and it stores in a memory card 10.

[0099] Inverse transformation of a PB signal and the writing to a memory card 10 are performed until it receives a download terminate signal "#13*" from a service center.

[0100] In a service center, if download of User Information of the user open space in a service center is finished, a download terminate signal "#13*" will be transmitted (step 410).

[0101] Then, since a menu display demand signal "#05*" is sent again (step 411), with a portable telephone 1, the menu of drawing 6 (f) is displayed on the information-display section 3 by control of CPU17.

[0102] If a user pushes a dial carbon button "1" and chooses upload in this condition, by CPU17, it will be changed into a upload demand signal "#14*", and will be transmitted to a service center (step 412).

[0103] In a service center, after receiving a upload demand signal "#14*", reception preparations of upload information are made and a upload preparation-completion signal "#15*" is transmitted to a portable telephone 1 (step 413).

[0104] In the portable telephone 1 which received this signal, User Information is read from a memory card 10, conversion Fig. **** conversion of drawing 12 is carried out, and it transmits to a service center as User Information (step 414).

[0105] In a service center, the PB signal which received is coded according to conversion drawing of drawing 12 , and User Information is stored in the room opened by this user that shows drawing 5 .

[0106] Conversion of a PB signal and the writing of a code are performed until it receives the upload terminate signal "#16*" from a portable telephone 1.

[0107] A portable telephone 1 transmits a upload terminate signal "#16*" to a service center, after ending upload of User Information in a memory card 10 (step 415).

[0108] If a upload terminate signal "#16*" is received, a service center will transmit a menu display demand signal "#05*" to a portable telephone 1 again (step 416), and will display the menu screen of drawing 6 (f) on the information-display section 3 in a portable telephone 1.

[0109] In a portable telephone 1, if there is also no upload demand and download demand, connection with a service center will be cut.
[0110] The above sequence can perform download to the memory card 10 of the portable telephone 1 of User Information in a service center, and upload to the user open space of the memory in a service center from the memory card 10 of a portable telephone 1.
[0111] With the gestalt of operation of this invention, an informational exchange is written possible by the coding by the PB signal, and even if it does not build circuits, such as a modem, in a portable telephone 1, it can be used as an information terminal.
[0112] When performing data communication with other terminal units (for example, it is called a personal computer and a personal computer for short), it can carry out via a service center.
[0113] In this case, data transfer becomes possible by connecting a modem to the administration terminal of a service center, as shown in drawing 13 , and performing a modem communication link with other terminal units (for example, personal computer).
[0114] Drawing 14 is a sequence chart in case other terminal (personal computer) users are a telephone carrier's registered users. Drawing 14 explains an operating sequence below.
[0115] First, a user telephones a service center (step 501). A modem is trained between the administration terminal of a service center, and a personal computer, and if a synchronization is established, "access number and password input-screen" drawing 15 (a) will be transmitted to a personal computer from a service center (step 502).
[0116] A user enters a access number and a password, pushes an Enter key, and transmits a access number and a password to the administration terminal of a service center (step 503).
[0117] The access number received from the database shown in drawing 5 is searched with an administration terminal, and a password is collated. The access number is registered, and when a password is in agreement, "User Information screen" drawing 15 (b) is transmitted to a personal computer (step 504).
[0118] The User Information screen edits the information registered into the user open space shown in drawing 5 .
[0119] A user can change the information on delivery (step 505) and a screen into an administration terminal for key information by the key stroke. Change information on a screen is performed by carrying out regeneration of the screen from an administration terminal (step 506).
[0120] When modification is completed, an Enter key is pushed with a personal computer and Enter key depression information is sent to an administration terminal (step 507).

[0121] The administration terminal which received Enter key depression information transmits "acknowledgement message" drawing 15 (c) to a personal computer (step 508).
[0122] A user can direct [which changes / or or] in a key stroke whether to carry out cancellation. That is, when changing, the Y key is pressed, a depression and when canceling, the N key is pressed, and it transmits to an administration terminal (step 509).
[0123] An administration terminal is registered into the user open space which shows modification information to drawing 5 by the bottom of Y key press, and registration to the user open space shown in drawing 5 is not performed at the time under N key press.
[0124] Thus, since modification of User Information with a personal computer is possible, a personal computer and a portable telephone 1 can do a communication link indirectly through a database.
[0125] In addition, a communication link is cut, when the access number is not registered or a password is not in agreement.

[Translation done.]

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]
[Drawing 1] It is the external view of the portable telephone in the gestalt of operation of this invention.
[Drawing 2] It is drawing showing an example of the content memorized to a memory card.
[Drawing 3] It is the block diagram showing the internal configuration of a portable telephone.
[Drawing 4] It is drawing in the gestalt of operation of this invention showing the relation between a user, a telephone carrier, and a dealer.
[Drawing 5] It is drawing showing the configuration of a telephone carrier's database.
[Drawing 6] It is drawing showing the example of a display of the display of a portable telephone.
[Drawing 7] It is the flow chart which shows the activity gestalt of a portable telephone.
[Drawing 8] It is a flow chart at the time of quiescence of a portable telephone, and a non-operated monitor.
[Drawing 9] It is a flow chart at the time of the key stroke of a portable telephone.
[Drawing 10] It is drawing showing upload of User Information from a portable telephone to the user open space of a service center, and download.
[Drawing 11] It is the sequence chart which shows the procedure of upload of User Information from a portable telephone to the user open space of a service center, and download.
[Drawing 12] They are conversion drawings, such as a PB signal and a character code.
[Drawing 13] It is the system chart showing the communication link of a portable telephone and other terminal units, for example, a personal computer.

[Drawing 14] It is the sequence chart which shows the procedure of a communication link of a service center and a terminal unit, for example, a personal computer.
[Drawing 15] It is the example of a screen display of the personal computer in the communication link of a service center and a terminal unit, for example, a personal computer.
[Description of Notations]
1 Portable Telephone
2 Antenna
3 Information-Display Section
4 Loudspeaker
5 Data Communication Carbon Button
6 Response Carbon Button
7 Dial Carbon Button Group
8 Microphone
9 Memory Card Insertion Opening
10 Memory Card
11 PB-Signal Receiver
12 PB-Signal Transmitter
13 Key Stroke Detector
14 Display Circuit
15 Receiving Selector
16 Transmitting Selector
17 CPU
18 Receiving Circuit
19 Sending Circuit
20 Wireless Circuit
21 Oscillating Detector

[Translation done.]